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ABSTRACT

The Cape Girardeau Project was involved in planning-operational year activities during the 1971-72 academic year. The two major kinds of activities centered on those dealing with planning and pilot classes in preparation for implementing the innovative Trimester/Modular Scheduling Plan at Cape Central Senior High School; and those aimed at preparing teachers through inservice education for more effective use of extended class periods under the new scheduling plan. Project activities in preparation for entering into the Trimester/Modular Scheduling Plan consisted of scheduling pilot classes from different disciplines and for several courses in double-period blocks of time for either one semester (90 days) or one trimester (60 days); planning sessions involving administrators, teachers, guidance counselors, and computer specialists; and professional travel to observe similar innovative scheduling plans. In preparation for the more effective use of extended daily class periods, project teachers were given a 32 week program of inservice education; professional travel to observe and study new kinds of organization for instruction and teaching strategies; supporting instructional services; and planning for team teaching. (Author)

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ED 082285

FIRST INTERIM EVALUATION REPORT

FACILITATING LEARNING THROUGH SYSTEMS MODIFICATION

Project No. 35-71-02-0

Planning-Operational Year

July 1, 1971 to June 30, 1972

Cape Girardeau Public Schools

District No. 63

61 North Clark Avenue

Cape Girardeau, Missouri 63701

Dallas F. Albers

Project Director

August 1, 1972

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PART I

SUMMARY DESCRIPTION OF PROJECT ACTIVITIES

DESCRIPTION OF PROJECT ACTIVITIES

The Cape Girardeau Project, Facilitating Learning Through Systems Modification, was involved in planning-operational year activities during the 1971-72 academic year ending June 30, 1972. During that year the project consisted of two major kinds of activities, (1) those dealing with planning and pilot classes in preparation for implementing the innovative Trimester/Modular Scheduling Plan at Cape Central Senior High School starting in September, 1972, and (2) those aimed at preparing teachers through inservice education for more effective use of extended class periods under the new scheduling plan.

ACTIVITIES RELATED TO THE SCHEDULING INNOVATION

Project activities in preparation for entering into the Trimester/Modular Scheduling Plan consisted of (1) scheduling pilot classes from different disciplines and for several courses in double-period blocks of time for either one semester (90 days) or one trimester (60 days); (2) planning sessions involving administrators, teachers, guidance counselors from Central High School, and computer specialists from Southeast Missouri State College; and (3) professional travel to observe and study similar innovative scheduling plans.

Pilot Classes

Forty-nine pilot classes were scheduled during the 1971-72 school term. Nine were scheduled under the trimester schedule and involved three rotating groups of seniors in English IV (3 classes),

Sociology (3 classes), and Government (3 classes). Forty classes were scheduled in double-period blocks of time and were completed in one semester. Subjects scheduled in these classes were English II (6 classes), English III (6 classes), World History (6 classes), American History (6 classes), Mathematics II - Geometry (4 classes), Mathematics III - Advanced Algebra and Trigonometry (2 classes), Mathematics IV - Pre-Calculus Mathematics (2 classes), General Biology (2 classes), Advanced Biology (2 classes), Chemistry (2 classes), and Physics (2 classes).

Project objectives seven and eight were concerned with modifications in the class schedule.

Planning Sessions

During the months of October and November administrators met with teachers from each department at Central High School in which class time allocations were to be significantly changed by the Trimester/Modular Schedule. Potential problems and prospects for the various classes and types of students were thoroughly explored. Some modifications were made in the original plan for allocating time to various classes.

During November, December, and January, several planning sessions were held involving guidance counselors and administrators to develop plans for (1) orienting students to the Trimester/Modular Scheduling Plan, and (2) pre-enrolling students for 1972-73 under the new plan. All pre-enrollment procedures and forms were revised to fit the new scheduling format.

During January, February, and March administrators and counselors held several meetings with the Director of Computer Services from Southeast Missouri State College to prepare for modifications in computer programming which were necessary in order to program the new schedule.

Professional Travel

Administrators and teachers traveled to Atlanta, Georgia, and Lockport, Illinois, to observe similar programs in operation and to attend seminars or meetings on these programs.

ACTIVITIES RELATED TO MODIFICATION IN TEACHING METHODS

Project activities to prepare teachers to use more effectively the extended daily class periods to be made available under the Trimester/Modular Scheduling Plan were (1) a thirty-two week program of inservice education for project teachers, (2) professional travel to observe and study new kinds of organization for instruction and teaching strategies, (3) supporting instructional services for project teachers, and (4) planning for team teaching.

Inservice Education

Twenty-seven classroom teachers and three guidance counselors received 32, two-hour sessions of inclass instruction taught by professors from the Center for Educational Improvement, a division of the College of Education at the University of Missouri-Columbia. (See Appendix A.) The general objectives for this inservice instruction were:

(1) To increase student participation in, and decrease teacher domination of, ongoing instructional activities in the classroom.

(2) To strengthen teachers' skills in evaluation of student achievement as a basis for individualizing instruction.

(3) To help teachers become familiar with team teaching and cooperative planning as organizational aids to providing for individual differences among students.

(4) To extend teachers' knowledge of alternative instructional strategies to motivate and maintain student interest.

Of the twenty-seven classroom teachers originally enrolled, two resigned their positions and were replaced in the program by other teachers. Two teachers requested, and were granted, permission to withdraw from the inservice class for health reasons, making a total of twenty-five teachers and three counselors who completed the inservice class. (See Appendix B.) These participants were awarded four semester hours of graduate credit from the University of Missouri for their participation.

Professional Travel

Teachers and administrators traveled to Atlanta, Georgia; Chicago, Illinois; Columbia, Missouri; Dexter, Missouri; Florissant, Missouri; and University City, Missouri, to study new kinds of organization for instruction and new teaching strategies.

Supporting Services

Teachers were given administrative assistance in planning for instruction, in test scoring services in the project office, and in

test scoring and item analysis services by the University of Missouri-Columbia and Southeast Missouri State College.

Team Teaching

Teachers in the inservice education class received instruction in organization for team teaching and differentiated staffing; in interdisciplinary and intradisciplinary approaches to teaming; and in the different purposes for, and types of, team planning.

Teachers were encouraged to consider the possibility of teaming as an approach to organizing for instruction to provide for individual differences among students. They were not forced to enter into team-teaching arrangements. Most of the inservice teachers expressed an interest in teaming, but only one pair of teachers requested to enter into a team-teaching arrangement for 1972-73. Those teachers were employed for three weeks during June to plan cooperatively for team teaching in English II starting in September, 1972.

Project objectives one, two, three-A, three-B, four, five, and six were concerned with modifications in the teaching behavior of inservice class participants.

PART II

EVALUATION OF PROJECT OBJECTIVES

OBJECTIVE 1

Statement of Objective 1

Each teacher will gain proficiency in conducting classes with interaction to reduce teacher verbalization of instruction to 60% or less within one academic year.

Description of Instructional Activity

Twenty-seven classroom teachers and three guidance counselors received 32, two-hour sessions of instruction by professors from the Center for Educational Improvement, University of Missouri-Columbia. Ten of these thirty-two class sessions dealt directly with helping teachers become aware of the verbal climate in their classrooms, coding and interpreting this verbal interaction, and controlling the verbal interaction which was occurring. Inservice class topics which were directly related to Objective 1 were:

Introduction to Classroom Verbal Interactive Behavior	1 session
Introduction to the VIB Coding System	1 session
Skill Development in Coding Classroom VIB	2 sessions
VIB Matrix Conversion	1 session
Matrix Interpretation	1 session
Micro-Teaching	3 sessions
Non-Verbal Communication in the Classroom	1 session

Method of Data Collection

Each participating classroom teacher audio tape recorded three, 30-minute episodes from a portion of one regular class they were assigned to teach. The only restriction was that the class had to be one where normal pupil and teacher verbal interaction was involved. The first

recording (referred to as the pretape) was made between August 30 and September 17, prior to, or in the early phase of, inservice instruction on Verbal Interactive Behavior. A second recording (the posttape) was made between December 1 and 17, following inservice instruction on Verbal Interactive Behavior, to determine if the verbal climate of teachers' classrooms had changed following this instruction. A final recording (the follow-up tape) was made between April 10 and 28 to see if any changes which had occurred in classroom verbalization had been retained.

Each of the three recordings for each participating teacher was VIB coded and the verbal interaction was analyzed by the Center for Educational Improvement at the University of Missouri-Columbia. Analyses for each taping--pretapes, posttapes, and follow-up tapes--were reported as a composite analysis for all participating classroom teachers.

Results of Pretape Analyses

Coding of all teachers' pretapes at three-second intervals produced a total of 19,722 observations of classroom verbal behavior. These observations, distributed into eleven coding categories, are shown in Table I.

Pretape analyses showed that almost seventy-one percent of the coded activity in those classrooms consisted of some kind of teacher verbalization. Student talk made up approximately twenty-one percent of the coded activity, and approximately eight percent of the activity was coded as silence or confusion.

TABLE I

DISTRIBUTION OF CLASSROOM VERBAL INTERACTION BY CATEGORIES
CLASSROOM AUDIO PRETAPES

Coding Category	Number of Observations		Percent of Total Observations	
Student Talk:				
Student Initiation	765		3.89	
Student Question	386		1.96	
Student Response	3,084		15.63	
Total, Student Talk		4,235		21.48%
Teacher Talk:				
Positive Reinforcement	1,276		6.47	
Using Student Ideas	245		1.24	
Teacher Question	3,127		15.86	
Teacher Lecture	8,741		44.32	
Directing Students	426		2.16	
Negative Reinforcement	104		.53	
Total, Teacher Talk		13,919		70.58%
Silence and Confusion:				
Silence	1,463		7.41	
Confusion	105		.53	
Total, Silence and Confusion		1,568		7.94%
Grand Total, All Categories		19,722		100.00%

A graphic illustration of pretaped classroom verbal interaction is shown in Figure 1.

Results of Posttape Analysis

Coding of all teachers' posttapes of classroom verbal interaction at three-second intervals produced a total of 19,540 observations. These observations, distributed into eleven coding categories, are shown in Table II.

TABLE II

DISTRIBUTION OF CLASSROOM VERBAL INTERACTION BY CATEGORIES
CLASSROOM AUDIO POSTTAPES

Coding Category	Number of Observations		Percent of Total Observations	
Student Talk:				
Student Initiation	1,218		6.23	
Student Question	493		2.52	
Student Response	3,992		20.43	
Total, Student Talk		5,703		29.18%
Teacher Talk:				
Positive Reinforcement	1,203		6.16	
Using Student Ideas	661		3.38	
Teacher Question	2,630		13.46	
Teacher Lecture	7,167		36.68	
Directing Students	236		1.21	
Negative Reinforcement	117		.60	
Total, Teacher Talk		12,014		61.49%
Silence and Confusion:				
Silence	1,624		8.31	
Confusion	199		1.02	
Total, Silence and Confusion		1,823		9.33%
Grand Total, All Categories		19,540		100.00%

Posttape analyses showed teacher verbalization to have been reduced to slightly more than sixty-one percent of the total activity in project teachers' classrooms following instruction in the Verbal Interactive Behavior analysis system. Student verbalization made up approximately twenty-nine percent of classroom activity with the remaining nine percent coded as either silence or confusion. The distribution of posttaped classroom verbal interaction is illustrated graphically in Figure 1.

Results of Follow-Up Tape Analysis

Coding of all teachers' follow-up audio tapes of classroom verbal interaction at three-second intervals produced a total of 16,959 observations. It should be explained that only twenty-four follow-up tapes were available for coding. Two teachers had withdrawn from the class for reasons of poor health and one of the twenty-five remaining teachers failed to submit a follow-up tape. These observations, distributed into eleven coding categories, are shown in Table III.

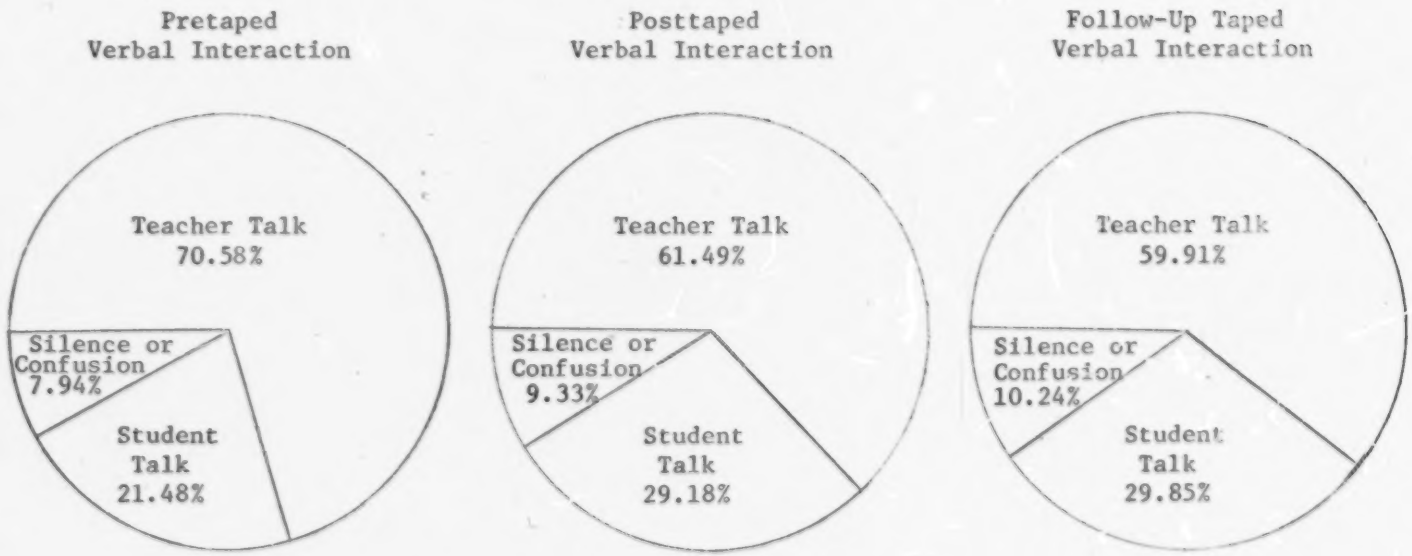
TABLE III

DISTRIBUTION OF CLASSROOM VERBAL INTERACTION BY CATEGORIES
CLASSROOM AUDIO FOLLOW-UP TAPES

Coding Category	Number of Observations		Percent of Total Observations	
Student Talk:				
Student Initiation	1,545		9.11	
Student Question	467		2.75	
Student Response	3,051		17.99	
Total, Student Talk		5,063		29.85%
Teacher Talk:				
Positive Reinforcement	974		5.74	
Using Student Ideas	213		1.26	
Teacher Question	2,538		14.97	
Teacher Lecture	6,214		36.64	
Directing Students	135		.80	
Negative Reinforcement	85		.50	
Total, Teacher Talk		10,159		59.91%
Silence and Confusion:				
Silence	1,553		9.16	
Confusion	184		1.08	
Total, Silence and Confusion		1,737		10.24%
Grand Total, All Categories		16,959		100.00%

Figure 1

DISTRIBUTION OF PRETAPED, POSTTAPED, AND FOLLOW-UP TAPED
CLASSROOM VERBAL INTERACTION



Follow-up tape analyses showed teacher verbalization to have been further reduced over the posttape to slightly below sixty percent. Student talk was up to a new high of almost thirty percent, while approximately ten percent of the classroom verbal interaction consisted of either silence or confusion. The distribution of follow-up taped verbal interaction in project classes is shown graphically in Figure 1.

Findings Relative to Objective 1

Coding of classroom verbal interaction recorded on the final classroom audio recordings of the year indicated that the goal of reducing teacher verbalization to sixty percent or less within one academic year had been successfully achieved. It is also notable that the amount of time teachers spent lecturing to classes was reduced from forty-four percent to thirty-six percent, a drop of eight percent in use of lecture as a teaching method.

OBJECTIVE 2

Statement of Objective 2

Teachers will, within one year, improve their skills in constructing objective tests to measure the results of their instruction to the point that item analysis will reveal less frequency of invalid [sic] questions.

Interpretation of Objective 2

Test validity may be defined as the fidelity with which the test measures what it purports to measure. A coefficient of test validity cannot be obtained unless some criterion observation exists to be correlated with test results. Content validity is purely a judgmental decision of qualified observers of how adequately a test samples achievement of the objectives of instruction. Since no instructional objectives accompanied the teacher-made tests used to evaluate Objective 2, an estimate of the content validity of these tests would have been pure speculation. In view of these facts, it appears the author of Objective 2 was uncertain of the intent of that objective.

Several measurable characteristics of tests are indications of test validity, however. Some of these are:

1. Test Reliability: To be valid a test must be reliable. A highly reliable test is always a valid measure of some function. A reliable test is theoretically valid, but it may be practically invalid as judged by its correlations with various independent criteria.[1]

---

[1]Henry E. Garrett, Statistics in Psychology and Education, (New York: David McKay Company, Inc., 1962), pp. 360-61.

2. Item Difficulty: A very low coefficient of item difficulty reveals that a small proportion of the students being tested answered the item correctly. This may indicate that the knowledge being tested by the item was poorly taught, or not taught at all, thus making that test item invalid.

3. Item Correlation: A very low, or negative, item correlation indicates that the students who performed best on the total test did not do well on the item under scrutiny. Such a correlation may infer that since the "best" students did poorly on the item, the item was sampling knowledge of content that was not taught, thus rendering the item invalid.

Description of Instructional Activity

Teachers and guidance counselors who participated in the inservice education program received ten, two-hour sessions of instruction which dealt directly with measurement and evaluation of pupil learning achievement. (See Appendix A.) Specific topics considered were:

Introduction to Stating Instructional Objectives in Behavioral Terms	1 session
Writing Behaviorally Stated Instructional Objectives	2 sessions
Types of Test Items	1 session
Evaluating Different Levels of Cognition	1 session
Evaluating Learning in the Affective Domain	1 session
Test Item Analysis and Validity	1 session
Test Reliability	1 session
Measures of Central Tendency and Dispersion	1 session
Errors of Measurement	1 session

Several other class sessions dealt indirectly with measurement and evaluation of pupil learning. They were:

Introduction to Individualizing Instruction	1 session
Mastery Learning	1 session
Introduction to Construction of Mastery Learning Pacquettes	1 session
Mastery Learning Pacquette Construction	2 sessions

Method of Data Collection

Each participating classroom teacher constructed three short-answer tests during the year--one before October 6 and prior to receiving inservice instruction on measurement and evaluation (referred to as the pretest), one during late January following inservice instruction on measurement and evaluation (the posttest), and one during the month of April (the follow-up test). Each test was prepared for, and administered to, one class taught by the inservice teacher who constructed the test. The tests were not specially prepared, but were an integral part of the normal evaluation plan for each course being taught.

Tests were scored and item analyzed by the Test Scoring Service at the University of Missouri-Columbia. The coefficients of estimated reliability and selected item statistics were compared for each teacher's three tests to determine if (1) the validity and reliability of tests had improved following inservice instruction in measurement and evaluation, and (2) if any improvement made in teachers' tests was retained.

Interpretation of Data

Two factors were considered in interpreting data to assess achievement of Objective 2. These factors were (1) the coefficient of reliability for each test, and (2) the item analysis for each test.

The Coefficient of Estimated Reliability. The estimate of reliability for each test constructed to evaluate Objective 2 was a coefficient of internal consistency computed using the Kuder-Richardson Formula 20 corrected for reduction in length with the Spearman-Brown Formula.

Two reliability criteria were established, the first with regard to improvement of the reliability of teacher-made tests, and the second with regard to how well teachers retained their ability to construct reliable test items.

It must be pointed out that the practice of making comparisons of coefficients of reliability is very risky unless variables which affect test reliability are controlled. Some of these factors are (1) the length of the test, (2) the homogeneity of the groups being tested, (3) the nature of the test with regard to speed or power, and (4) the philosophy underlying the instruction which preceded evaluation. Since none of these factors were held constant in the evaluation of Objective 2, these pretest, posttest, and follow-up test comparisons must be made in general terms and with great caution.

Comparisons were made only for those twenty-four teachers who had complete data including a pretest, a posttest, and a follow-up test.

If the coefficient of reliability on both the posttest and the follow-up test were higher than the pretest coefficient of reliability, the teacher was judged to have "definitely improved" his skill in constructing reliable test items.

If either a teacher's posttest or his follow-up test was more reliable than his pretest, he was judged to have "probably improved" in his ability to construct more reliable test items.

If a teacher's pretest had a higher coefficient of reliability than either his posttest or his follow-up test, he was judged to have shown "no improvement" of skill in constructing reliable test items.

The Item Analysis. Two item statistics were considered in evaluating the quality of each teacher-made test. These statistics were (1) the coefficient of item difficulty, and (2) the coefficient of item correlation. Since several tests contained two-option items, distractor effectiveness could not be considered in evaluating the tests.

Item difficulty coefficients tell the proportion of students taking the test who responded correctly to a given item. Since the teacher-made tests used to evaluate Objective 2 were not based on a continuous progress-mastery learning organization of content, the usefulness of an item to discriminate between "good" students and "poor" students was considered important. Therefore, the following criteria were established to make judgments between "satisfactory" items and "questionable" items with regard to item difficulty.

1. An item with an item difficulty coefficient higher than .90 was considered a "questionable" item because it was too easy to discriminate effectively.
2. An item with a difficulty coefficient below .20 was considered "questionable" on the assumption that (a) it may have been invalid because too many pupils responded incorrectly, or (b) such an item may have been unreliable because there was evidence that many pupils misinterpreted the question.

3. An item with a difficulty coefficient between .20 and .89 was judged to be a "satisfactory" item offering evidence of discriminating between pupils and giving no evidence of being invalid or unreliable.

The coefficient of item correlation ior a teacher-made test item is considered "unacceptable" by most psychometrists if it falls below .30. Items with negative item correlations are always invalid and/or highly unreliable. Therefore, an item correlation coefficient of .29 or below was considered unsatisfactory in this report.

Results Relative to Test Reliability

Of the twenty-four teachers for whom complete data were available, thirteen, or fifty-four percent, showed evidence of "definite improvement" in their ability to construct reliable test items by producing both posttests and follow-up tests with reliability estimates which exceeded the reliability for their pretest. Five teachers, or twenty-one percent, indicated "probable improvement" in skill by producing either a posttest or a follow-up test with a higher reliability coefficient than that for their pretest. Six teachers, or twenty-five percent, failed to improve the test reliability of either their posttest or follow-up test over their pretest and were said to have shown "no improvement" in skill in constructing more reliable test items. Data regarding test reliability are shown in Table IV.

Any teacher whose follow-up test coefficient of reliability was .70 or above was judged to have "retained" his skill in constructing reliable test items. Sixteen teachers, or sixty-seven percent, showed

TABLE IV

KUDER-RICHARDSON 20 RELIABILITY ESTIMATES FOR TEACHER-MADE TESTS: PRETEST, POSTTEST, AND FOLLOW-UP TEST

Teacher	Pretest			Posttest			Follow-Up Test			Skill Improved	Skill Retained
	No. Items	No. Subjects	r_{hh}	No. Items	No. Subjects	r_{hh}	No. Items	No. Subjects	r_{hh}		
Aeschlimann	50	30	.780	60	34	.829	50	24	.882	*	Yes
Austin	10	53	.348	20	54	.844	20	54	.883	*	Yes
Braun	Entered Late			63	19	.799	31	23	.699	Data Incomplete	
Cannon	20	27	.760	Withdrew From Course						Data Incomplete	
Copeland	50	21	.812	Withdrew From Course						Data Incomplete	
Crowley	50	22	.767	100	23	.917	34	21	.859	*	Yes
Decker	50	95	.806	30	21	.756	30	57	.789	***	Yes
Gau	25	13	.606	40	64	.669	20	30	.704	*	Yes
Johnson	18	16	.703	35	38	.823	15	35	.777	*	Yes
Knight	40	69	.787	55	54	.796	26	16	.835	*	Yes
Long	30	25	.528	35	45	.833	75	23	.917	*	Yes
Lynch	20	29	.476	23	24	.917	40	22	.756	*	Yes
Muegge	40	19	.721	30	24	.683	40	14	.729	**	Yes
Nickell	53	23	.766	70	21	.764	25	24	.699	***	
Phillips	20	28	.741	50	20	.833	50	18	.848	*	Yes
Plunk	30	52	.697	24	49	.708	14	15	.755	*	Yes
Profilet	30	39	.247	38	17	.242	20	21	.208	***	
Sackman	50	22	.660	Withdrew From Course						Data Incomplete	
Sadler	50	21	.686	40	11	.507	36	19	.579	***	
Scherer	33	28	.478	65	28	.845	56	28	.773	*	Yes
Schrader	40	26	.802	23	24	.123	25	24	.487	***	
Schuch	20	25	.580	18	20	.854	30	24	.652	*	
Sivia	61	22	.499	50	16	.902	50	15	.793	*	Yes
Snider	70	29	.658	50	28	.679	25	26	.628	**	
Thomas	50	31	.819	45	53	.915	20	16	.058	**	
Williams	40	74	.610	25	69	.466	35	52	.791	**	Yes
Witvoet	25	38	.708	20	21	.418	25	22	.680	***	
Woemmel	70	24	.827	63	21	.871	50	50	.755	**	Yes

*Skill "Definitely Improved" = 13 **Skill "Probably Improved" = 5 ***Skill "No Improvement" = 6

N = 24

evidence of having retained any such skill they had acquired as shown in Table IV.

Results Relative to Test Item Analysis

For the purpose of making decisions with regard to the quality of test items to evaluate the achievement of Objective 2, the following item analysis criteria were established. A test item with an item difficulty coefficient of not less than .20 or more than .89, and an item correlation coefficient of .30 or above, was considered a "good" item. An item with an item difficulty coefficient of .19 or below or .90 or above, and/or an item correlation coefficient of .29 or below was regarded as a "questionable" item for purposes of this evaluation.

Examination of the data presented in Table V indicated that fourteen, or fifty-eight percent, of the inservice teachers produced a higher percentage of "good" items on the posttest than they did on the pretest. Eighteen teachers, or seventy-five percent, produced a higher percentage of "good" items on the follow-up test than they did on the pretest. Eleven teachers, or forty-six percent, produced a higher percentage of "good" items on both the posttest and the follow-up test than they did on the pretest.

When the data were pooled for all teachers on each testing, it was found that the percentage of "good" items increased with each testing. Forty percent of all pretest items met the item difficulty and item correlation criteria which had been established for rating as a "good" item. Forty-three percent of the posttest items met the established

TABLE V

NUMBERS AND PERCENTAGES OF TOTAL TEST ITEMS MEETING CRITERIA FOR ITEM DIFFICULTY AND ITEM CORRELATION

Teacher	Pretest			Posttest			Follow-Up Test			% "Good" Items Increased*
	Total Items	Number "Good" Items	% "Good" Items	Total Items	Number "Good" Items	% "Good" Items	Total Items	Number "Good" Items	% "Good" Items	
Aeschlimann	50	24	48	60	31	52	50	29	58	X
Austin	10	6	60	20	16	80	20	18	90	X
Braun**	Entered Late			63	27	43	31	13	42	Incomplete
Cannon**	20	12	60	Withdrew From Course						Incomplete
Copeland**	50	24	48	Withdrew From Course						Incomplete
Crowley	50	17	34	100	18	18	34	16	47	
Decker	50	27	54	30	13	43	30	21	70	
Gau	25	6	24	40	17	43	20	13	65	X
Johnson	18	13	72	35	24	69	15	13	87	
Knight	40	23	58	55	22	40	26	18	69	
Long	30	12	40	35	15	43	75	36	48	X
Lynch	20	6	30	23	13	57	40	15	38	X
Muegge	40	18	45	30	11	37	40	19	48	
Nickell	53	25	47	70	27	39	25	12	48	
Phillips	20	14	70	50	25	50	50	28	56	
Plunk	30	16	53	24	15	63	14	10	71	X
Profilet	30	7	23	38	12	32	20	7	35	X
Sackman**	50	12	24	Withdrew From Course						Incomplete
Sadler	50	9	18	40	9	23	36	12	33	X
Scherer	33	7	21	65	28	43	56	14	25	X
Schrader	40	22	55	23	5	22	25	9	36	
Schuch	20	11	55	18	14	78	30	6	20	
Sivia	61	14	23	50	24	48	50	15	30	X
Snider	70	13	19	50	16	27	25	9	36	X
Thomas	50	17	34	45	40	89	20	3	15	
Williams	40	16	40	25	9	36	35	19	54	
Witvoet	25	15	60	20	5	25	25	10	40	
Woemmel	70	30	43	63	29	46	50	21	42	
Totals	925	368	40	1,009	438	43	811	373	46	11

*Percentage of good items increased on both posttest and follow-up test.
**Data Incomplete. Not included in totals.

criteria and forty-six percent of the follow-up test items were "good" items.

Findings Relative to Objective 2

Because interpretation of the intent of Objective 2 is subject to question, because comparisons between the kinds of data used to evaluate this objective are suspect, and because no criterion was stated in the objective or in the original evaluation plan, only highly subjective conclusions of success or failure in achieving this objective can be reported.

Since over one-half of the inservice education teachers showed "definite improvement" in constructing more reliable tests, and since only one-fourth of them failed to show any indications of improvement, it seems safe to conclude that the instruction in measurement and evaluation did help several teachers improve their skill in constructing more reliable test items.

Even though some improvement was noted in the item analyses of teachers' tests, the inconsistency of improvement made by some teachers was disappointing. Close examination of the results for each teacher reveals an inconsistency which leads this evaluator to suspect that (1) teachers, generally, did learn some techniques of constructing "good" test items, but that (2) many were not sufficiently impressed with the importance of careful test item construction that they put their knowledge into practice.

It is concluded that teachers, generally, did improve their skill in constructing items of evaluation, but that their application of this skill left much to be desired.

OBJECTIVE 3-A

Statement of Objective 3-A

Teachers' instructional process will be changed to reduce teacher dominance by 15% in the first year.

Description of Instructional Activity

Since, as in Objective 1, it was intended to bring about change in the verbal teaching behavior of teachers through an inservice education program, the same description of instructional activity stated in the evaluation of Objective 1, also applies to Objective 3-A.

Method of Data Collection

Three audio tapes of classes taught by each inservice teacher were used in evaluation of Objective 1. These same three audio tapes--a pretape, a posttape, and a follow-up tape--were also the sources of data used to evaluate the achievement of Objective 3-A. The dates and methods used in collecting this data are described in the evaluation of Objective 1.

Interpretation of VIB Indices Related to Objective 3-A

The Verbal Interactive Behavior (VIB) Matrix provides five indices which generalize verbal interaction in the classroom. (See Appendix C.) These indices are:

Index I: Student Involvement Index
Index II: Speaker Change Index
Index III: Encouragement Index
Index IV: Domination Index
Index V: Effectiveness Index

Index IV, the Domination Index, discloses the extent to which the teacher verbally dominates the classroom by providing a ratio of total teacher talk to the total number of observations of verbal activity recorded at three-second intervals in the classroom. This index is obtained by dividing the totals of matrix columns four through nine (positive reinforcement, using student ideas, teacher question, teacher lecture, directing students, and negative reinforcement) by the totals of all matrix columns, one through eleven.

Results of Pretape Analysis

The combined pretape analyses for all teachers produced a Domination Index of .706 (13,919 teacher talk observations divided by 19,722 total coded observations). These data are presented in Table I.

Results of Posttape Analysis

The combined posttape analyses for all teachers produced a Domination Index of .615 (12,014 teacher talk observations divided by 19,540 total coded observations). These data are presented in Table II.

Results of Follow-Up Tape Analysis

The combined follow-up tape analyses for all teachers produced a Domination Index of .599 (10,159 teacher talk observations divided by 16,959 total coded observations). These data are shown in Table III.

Findings Relative to Objective 3-A

Audio-taped data used in the evaluation of this objective indicated that prior to receiving inservice instruction in Verbal Interactive

Behavior (VIB) teachers had a verbal Domination Index of .706, or they, as a group, spent about 71% of the time in class involved in some kind of teacher verbalization. At the end of the inservice education course these teachers, as a group, had reduced their verbal Domination Index to .599, or they were then spending about 60% of their class time in teacher verbalization. In other words, at the time follow-up audio tapes were made of classroom verbal interaction in project classrooms, inservice teachers, as a group, were only 84.8% as verbally dominant in their classrooms as they were at the time of the audio pretaping.

Results of these audio pretape/follow-up tape comparisons would indicate that as a result of the inservice instruction, project teachers did reduce their domination of classroom verbal interaction by 15.2%. Objective 3-A was successfully achieved.

OBJECTIVE 3-B

Statement of Objective 3-B

Student participation in classroom verbal interaction will increase by 15% during the year.

a. Increase in student initiated [sic] responses.
b. Increase in student initiated questions.

Interpretation of Objective 3-B

As stated in Objective 3-B-a, the term "student initiated responses" is a contradiction which makes interpretation of the objective problematic. To clarify the possible intent of that portion of Objective 3-B, the three student talk categories of the Verbal Interactive Behavior coding system are defined as follows:[2]

> Classification 1, Student Initiation. When the student raises his hand to make a statement or continue a response to the classroom activity, the appropriate classification is number one. The statement . . . may concern something that the teacher or another student said. He is not answering or proposing a question. He is making a statement or a response. . . . The student is expressing his own ideas or opinions on the topic.
>
> Classification 2, Student Question. When a student asks a question it is coded under classification two. . . . It indicates that the student wants further information or wishes to inquire further into the topic.
>
> Classification 3, Student Response. Classification three occurs when the teacher asks a question. In all cases the answer has been teacher initiated. If the student volunteers information beyond that called for by the teacher it is coded as #1.

---

[2]Center for Educational Improvement, "Introduction to Verbal Interactive Behavior" (Mimeographed Instructional Handbook for Inservice Teachers printed by the College of Education, University of Missouri-Columbia, Columbia, Missouri), 1969.

Since the precise intent of Objective 3-B-a is unclear, all three student talk categories shall be examined in the evaluation of Objective 3-B.

Description of Instructional Activity

The instructional activity for inservice teachers which is related to Objective 3-B is described in the evaluation report for Objective 1.

Method of Data Collection

Data sources for evaluating Objective 3-B are described in the evaluation report for Objective 1.

Interpretation of VIB Indices Related to Objective 3-B

Index I of the Verbal Interactive Behavior Matrix is the Student Involvement Index. This Index describes the extent to which students are active verbal participants in the classroom. Index I is calculated by summing columns one, two, and three of the VIB matrix (student initiation, student question, and student response) and dividing the sum by the total number of observations in VIB matrix columns one through eleven. (See Appendix C.)

Results of Pretape Analysis

The combined pretape analyses for all coded classes resulted in a Student Involvement Index of .215 (4,235 student talk observations divided by 19,722 total observations).

Of the total 4,235 student talk observations, 765 were Student Initiation, 386 were Student Question, and 3,084 were Student Response to teachers' questions. All audio pretape data are summarized in Table I.

Results of Posttape Analysis

The combined posttape analyses for all coded classes resulted in a Student Involvement Index of .292 (5,703 student talk observations divided by 19,540 total observations).

Of the total 5,703 student talk observations, 1,218 were Student Initiation, 493 were Student Question, and 3,992 were Student Response to teachers' questions. All audio posttape data are summarized in Table II.

Results of Follow-Up Tape Analysis

The combined follow-up tape analyses for all coded classes resulted in a Student Involvement Index of .299 (5,063 student talk observations divided by 16,959 total observations).

Of the total 5,063 student talk observations, 1,545 were Student Initiation, 467 were Student Question, and 3,051 were Student Response to teachers' questions. All audio follow-up tape data are summarized in Table III.

Findings Relative to Objective 3-B

Student Involvement. Audio pretape data recorded before teachers received inservice VIB instruction indicated that students were verbally involved 21.5 percent of the time they were in class. By the time of audio follow-up taping, near the end of the year, student verbal involvement had risen to 29.9 percent. In summary, student verbal involvement at the time of follow-up taping was 139 percent of what it was when pretapes were recorded. Therefore, it can be said that the stated

goal of increasing student participation in classroom verbal interaction by 15 percent had been achieved.

Student Initiation. The proportion of total classroom verbal interaction devoted to Student Initiation more than doubled between the pretaping and the follow-up taping. On the pretapes only 3.87 percent of the total verbal interaction was coded as Student Initiation, on the pos tapes Student Initiation had risen to 6.23 percent and by the time of follow-up taping 9.11 percent of all classroom verbal interaction was coded as Student Initiation. If the goal of Objective 3-B-a was to increase Student Initiation, it is apparent that the goal was achieved.

Student Question. While some increase was noted in the numbers of questions raised by students, growth in this category of student involvement was not quite so extensive as it was in Student Initiation. On pretapes Student Question provided 1.96 percent of the total verbal interaction in audio-taped classes. On posttapes 2.52 percent of all classroom verbal interaction was coded Student Question. Follow-up tapes indicated that 2.75 percent of the verbal interaction in these classrooms consisted of Student Question.

Student Response. While the percentage of classroom verbal interaction devoted to Teacher Question declined slightly during the year (pretape=15.85%, posttape=13.45%, follow-up tape=14.96%), the percentage of classroom verbal interaction spent by students in responding to those questions increased slightly (pretape=15.63%, posttape=20.42%, follow-up tape=17.99%). This might be interpreted as indicating that

while teachers were asking fewer questions at the end of the year, the cognitive level of their questions had improved. By the time of follow-up taping teachers appear to have been asking more "thought" questions which required lengthy, considered responses from students, while questions requiring short, knowledge level responses may have decreased.

Summary Conclusions Relative to Achievement of Objective 3-B

In summary, the analyses of audio-taped data seem to warrant the following conclusions:

(1) The objective of increasing students' participation in verbal classroom interaction by 15% was achieved.

(2) Students showed a marked increase in the frequency with which they expressed their own ideas or knowledge on a topic.

(3) There was some increase in the numbers of questions originating from students, but the increase could be termed smaller than was desired.

(4) Teachers were asking students more questions, and there is some evidence that their questions changed during the year to a higher level of cognition.

OBJECTIVE 4

Statement of Objective 4

During the first year teachers will develop the ability to apply inquiry and discovery techniques in their classrooms to the point that 75% of the students and 100% of the supervisors will realize that instruction of this nature has been increased.

Description of Instructional Activity

The desirability of using inquiry and guided discovery in instruction served as a point of reference through all instruction in Verbal Interactive Behavior (VIB). Continuous emphasis was given to the desirability of moving teaching behavior away from categories seven, eight, and nine (teacher lecture, directing students, and negative reinforcement) and toward categories four, five, and six (positive reinforcement, using student ideas, and teacher question).

Use of the inquiry approach was also encouraged as the basic philosophy to be used underlying the behaviorally stated instructional objectives which inservice teachers learned to construct. Inservice class sessions on individualizing instruction emphasized inquiry and guided discovery as desirable instructional techniques.

One two-hour class session was given specifically to "Inquiry Teaching"; teachers were encouraged to incorporate inquiry techniques into the micro-teaching episodes they prepared for demonstration to, and critique by, inservice teachers and their instructors.

Collection of Data

Data to evaluate Objective 4 came from three sources:

The I.B.S. Student Questionnaire About Classroom Practices
The Cape Central "Feelings About Your School" Student Opinionnaire
Observation of classroom practice by administrators

The I.B.S. Student Questionnaire About Classroom Practices. The I.B.S. Student Questionnaire was developed by the Center for Educational Improvement at the University of Missouri-Columbia. (See Appendix D.) The instrument is constructed to collect student opinion regarding the amount of inquiry, investigation and guided discovery which is occurring in classroom instruction.

The I.B.S. Student Questionnaire About Classroom Practices was administered to all pupils enrolled in experimental double-period-block classes or trimester classes, as a pretest between September 22 and October 1, 1971, and as a posttest between April 17-28, 1972. Questionnaires were scored by the University of Missouri-Columbia and the pretest/posttest comparison of responses was tested for significance of difference.

The Cape Central "Feelings About Your School" Student Opinionnaire. The "Feelings About Your School" opinionnaire was developed in the Cape Girardeau Public Schools through the cooperative effort of a committee, chaired by the ESEA Title III Project Director, consisting of the junior and senior high school guidance counselors and Central High School administrators. (See Appendix E.)

The opinionnaire is divided into eight parts:

Part I: Inquiry and Discovery Techniques
Part II: Guidance Services
Part III: Students' Attitudes Toward Teachers
Part IV: Student, Faculty, Administrator Relationships
Part V: Teaching Procedures
Part VI: Curriculum Content
Part VII: Extracurricular Activities
Part VIII: Identification with School

The Cape Central "Feelings About Your School" Student Opinionnaire was administered to all pupils enrolled in double-period-block classes or trimester classes, as a pretest between September 22 and October 1, 1971, and as a posttest between April 17 and 28, 1972. The opinionnaires were hand scored in the Cape Girardeau Title III Project Office. Responses to Part I, "Inquiry and Discovery Techniques," were reported in percentages of total respondents. (See Appendix F.)

Observation of Classroom Instruction. The Director of Secondary Education and the ESEA Title III Project Director each visited and observed at least one project teacher's class each quarter. An assessment was made of the amount of inquiry and guided discovery teaching being used by each teacher. A brief anecdotal report was prepared on the observation. These reports are exhibited in Appendix H.

Results from the I.B.S. Student Questionnaire About Classroom Practices

A total of 460 subjects responded to pretest administration of the questionnaire, and 426 subjects responded to the posttest administration. The mean score on the pretest was 176.63. The posttest mean score was 172.34. A mean loss of 4.29 occurred between pre-administration and post-administration of the questionnaire. Apparently, respondents to

the questionnaire perceived less inquiry teaching taking place at the time of posttesting than at the time of pretesting.

When the difference between the pretest and posttest means was tested for significance using the t test, the resulting t value of .404 was not significant when interpreted at the .05 level of confidence, a t ratio of 2.15 being required for significance at that level. It appeared that pupils, as a group, could not perceive any difference in teaching techniques as a result of the inservice instruction teachers had received.

Results from the Cape Central "Feelings About Your School" Student Opinionnaire, Part I

The Cape Central "Feelings About Your School" Student Opinionnaire is a five-choice, Likert-type scale from which the respondent may elect five degrees of concurrance with a statement: Strongly Disagree, Disagree, Uncertain, Agree, Strongly Agree.

The degree of agreement or disagreement with a statement was disregarded in tabulating responses to a statement. Agreement responses to items 1, 2, 4, 8, 9, 11, 12, 14, 15, 16, 17, 18, and 19 were interpreted to mean that respondents thought inquiry techniques were being used. Use of inquiry techniques was indicated by disagreement responses to items 3, 5, 6, 7, 10, and 13. (See Appendix F.)

Students responded to nine of the nineteen items in a way that would indicate more inquiry teaching was taking place at the time of posttesting than at the time of pretesting as shown in Table VI. However, responses to ten of the nineteen items indicated that less inquiry teaching was occurring at the end of the year.

TABLE VI

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART I, INQUIRY AND DISCOVERY TECHNIQUES

Item No.	Pretest		Posttest		Pretest/Posttest Change in Response	
	Number Respondents	Percentage Respondents Indicating Inquiry Techniques	Number Respondents	Percentage Respondents Indicating Inquiry Techniques	More Inquiry	Less Inquiry
1	466	42.3	427	45.1	2.8%	
2	466	28.8	427	37.0	8.2%*	
3	466	18.5	427	20.3	1.8%	
4	466	56.0	427	53.2		2.8%
5	466	29.6	427	23.4		6.2%
6	466	32.2	427	27.7		4.5%
7	466	37.8	427	39.8	2.0%	
8	466	66.5	427	54.3		12.2%*
9	466	45.5	427	45.4		.1%
10	466	28.7	427	30.4	1.7%	
11	466	66.9	427	59.0		7.9%
12	466	15.2	427	11.2		4.0%
13	465	25.8	427	29.9	4.1%*	
14	465	45.6	427	39.3		6.3%
15	465	50.8	427	48.9		1.9%
16	465	29.2	427	36.8	7.6%*	
17	465	32.5	427	36.3	3.8%	
18	465	31.8	427	27.9		3.9%*
19	465	38.1	427	38.2	.1%	

*Shift in preference was significant. A critical value of 3.84 is required for significance at the .05 level of confidence.

Pretest/posttest shifts in the expressed opinions of respondents were tested for significance of difference, using the chi square technique, to determine if a sufficient number of changes occurred to indicate a real change in students' perceptions of the amount of inquiry taking place, or if the shifts in opinions were due to chance, alone.

The responses of students to five items were found to differ significantly between the pre- and post-administration of the opinionnaire when interpreted at the .05 level of confidence. However, three of these shifts were interpreted as indicating that students thought inquiry and guided discovery methods had increased, while the other two responses indicated that less inquiry and guided discovery was occurring at the end of the year.

Significant Differences Indicating an Increase in Inquiry and Guided Discovery. Three statistically significant changes in student responses occurred, from pretest to posttest, in such a way as to indicate that more inquiry and guided discovery methodology was being used. These response shifts were to the following opinionnaire items:

2. The goals of the course and of each assignment are explained by the teacher and are clearly understood by the students.

13. We usually learn broad, general ideas in our classes, then have to use these to solve specific problems.

16. I have many assignments which require me to research problems in the library.

"Agree" responses to item Number 2 increased by 8.2% on the posttest over the pretest. This shift in students' opinions produced a chi square value of 10.14 which was statistically significant at the .05 level of confidence, a value of 3.84 being necessary for significance. Students' understanding of pre-established objectives toward which they are to work is generally conceded to be an essential basis for inquiry or guided discovery methodology, though this characteristic of instruction is not limited to those kinds of methodology, alone.

By disagreeing with item Number 13 students were expressing the opinion that less deductive teaching was being used. The deductive

approach is more often associated with traditional didactic methodology, while the inductive approach is associated with inquiry methodology. In interpreting this shift in responses it was concluded that students believed the deductive approach was being used less at the time of posttesting, hence didactic methodology was decreasing. Slightly over four percent more students expressed this belief on the posttest than on the pretest, producing a chi square value of 6.09, significant at the .05 level of confidence.

Agreement with item Number 16 indicated that students thought they were doing more library research to solve problems, an important aspect of inquiry. Posttest agreement responses to this item increased by 7.6% over pretest agreement responses. This shift in responses produced a chi square value of 5.57 which was significant at the .05 level of confidence.

Significant Differences Indicating a Decrease in Inquiry and Guided Discovery. Two statistically significant differences between pretest and posttest opinionnaire items indicated that less inquiry and guided discovery was being used at the end of the year than at the beginning. These items were:

8. My teachers usually do not tell us the answers, but they help guide us in discovering the answers.

18. The way we go about learning at Central will help me become a more self-sufficient person after I graduate.

A pretest to posttest decline of 12.2% in agreement responses to item Number 8 indicated that students thought teachers were doing more didactic teaching and less inquiry teaching at the end of the year than

at the beginning. This difference between responses resulted in a chi square value of 7.12 which was significant at the .05 level of confidence.

Too many assumptions would have been involved if item Number 18 were to have been interpreted as being directly related, in the students' perceptions, to the amount of inquiry and guided discovery methodology being used. Such assumptions would have been too subject to question to have produced any reliable conclusions. However, significantly fewer students did agree on the posttest, than agreed on the pretest, that the teaching methods used in their classes at Central would help them become more self-sufficient adults.

Results of Classroom Observations by Administrators

Each quarter of the school year the Director of Secondary Education and the ESEA Title III Project Director each visited and observed a class being taught by an inservice education teacher. The Title III Project Director also observed and reported his observations of micro-teaching episodes prepared and presented by inservice teachers. The primary purpose of these observations was to assess the ability of the teacher to use inquiry and guided discovery techniques in instruction. These observations were reported in anecdotal form. The reports are exhibited in Appendix H.

The Senior High School Principal also observed classes taught by inservice teachers, but failed to report his observations.

Observers, generally, reported successful use of inquiry and guided discovery methods.

Summary Conclusions Relative to Achievement of Objective 4

Of the three sources of data used as a basis for evaluating achievement of Objective 4, only the observations of classroom instruction by administrators offered any consistent evidence that inquiry and guided discovery techniques were being used in instruction by inservice teachers. These favorable classroom observations may have been the result of (a) special preparation for most observations by the teacher observed, (b) the way teachers were selected for these observations, and (c) optimism on the part of the observers.

Neither the results of the I.B.S. Student Questionnaire About Classroom Practices, nor of the Cape Central "Feelings About Your School" Student Opinionnaire produced any evidence that an increase in inquiry or guided discovery methodology was perceived by the students. To the contrary, there were some inconclusive indications that a decrease in these approaches to instruction may have occurred during the year.

It must be concluded that the objective of increasing teachers' abilities to use inquiry and discovery techniques was not achieved; or that if this ability was indeed acquired, it was not put into regular practice by teachers.

OBJECTIVE 5

Statement of Objective 5

Teachers will learn to work together cooperatively in planning for team teaching to the extent that each team leader and the project director will evaluate each teacher as working cooperatively in team planning at the end of the first year.

Description of Instructional Activity

Teachers enrolled in the inservice education program received eight hours of inclass instruction on the following topics directly related to team teaching:

Introduction to Individualizing Instruction	1 session
Team Teaching: One Approach to Facilitating Individualized Instruction	1 session
Team Teaching and the Differentiated Staffing Model	1 session
Individualized Instruction	1 session

Teachers were not forced into team teaching arrangements. They were encouraged to consider establishing teaching teams. Teachers were asked by administrators to explore possibilities for intradisciplinary teaming in their respective departments. If two or more teachers were interested, they were asked to bring a request to the administration to enter into a team planning arrangement to develop plans for the 1972-73 school term.

Results of Inservice Instruction on Team Teaching

As a result of inservice instruction on team teaching, only two teachers entered a request with the administration to be allowed to enter

into a team teaching arrangement. These teachers were employed with ESEA Title III funds during June, 1972, to develop plans for team-taught classes in English II to be initiated in September, 1972. A summary of these planning sessions is exhibited in Appendix G. These two teachers were scheduled into a team teaching arrangement for English II in the 1972-73 Central High School master class schedule.

At the close of inservice instruction on team teaching, members of the inservice class held a group discussion to consider the advantages and disadvantages of entering into team teaching arrangements at Central High School. All ideas which were expressed by the class members are summarized below:

Advantages of Team Teaching at Central High School

1. Tracked classes can be combined for large group instruction.
2. More efficient use can be made of resource people.
3. Interdisciplinary integration of subject matter can be effected.
4. Personalities of several teachers will benefit students.
5. Standardization of teaching procedures and content will be promoted.
6. Improved instruction will result from mutual stimulation of teachers in a team.
7. Possibilities to provide for individual differences will be increased without denying "slow" or "fast" pupils the benefit of inclass associations with heterogeneous groups.

Disadvantages of Team Teaching at Central High School

1. Adequate facilities are not available for large group instruction.
2. Adequate facilities are not available for small group instruction and independent study.

3. Supplies of instructional materials and equipment are inadequate for this kind of instruction.

4. Teacher aides and other support personnel are not available.

5. Problems of student record keeping will be increased.

6. Artificiality of boundaries between some subjects inhibits teaming.

7. Turnover of team personnel, especially team leaders, will create problems.

8. Lack of adequate team planning time will be a handicap.

9. Enrollments in some subjects are too small to "make" a class every trimester, thus eliminating some interdisciplinary course combinations.

10. Teaming is impossible in single-section subjects.

11. Teaming will compound scheduling problems for the administration.

12. Dual enrollment of junior high and senior high students in the same classes is not possible because of different time schedules (trimester and semester).

13. Teaming will force teacher conformity. Academic freedom will be inhibited.

14. Evaluation problems will be created because standards of different teachers in the same team will vary.

It should be noted that, in the opinion of administrators, several of the disadvantages to teaming cited by teachers did not really exist. Some appeared to be rationalizations on the part of some individuals to justify their reluctance to break away from traditional practices. A reluctance on the part of the building administration to enter into teaming arrangements also appeared to encourage a few recalcitrant teachers to continue with their single classroom-one teacher organization for instruction.

Findings Relative to Objective 5

Inservice instruction failed to generate more than occasional enthusiasm for teaming. The enthusiasm of a single teacher for teaming was not productive unless a willing teammate could be found. In view of its limited acceptance by inservice teachers, it must be stated that Objective 5 was not achieved.

OBJECTIVE 6

Statement of Objective 6

Teachers' attitudes toward teaching and students, as measured by the Minnesota Teacher Attitude Inventory, will reveal a more positive attitude toward students on at least 20% of the test items after one year of participation in the project.

Interpretation of Objective 6

The rationale underlying Objective 6 was twofold:

1. Inservice education activities would provide participating teachers with new insights into learning theory, and into the characteristics of present day adolescents which would positively affect teachers' attitudes toward their pupils.
2. Scheduling students and their teacher in long-block-of-time experimental classes each day would help teachers come to know their pupils better and to better understand their problems.

Description of Instructional Activity

Twenty-seven classroom teachers and three guidance counselors received thirty-two weeks of inservice instruction on new approaches to teaching.

Inservice education teachers were assigned to teach a total of forty-nine classes which met daily for longer than the traditional 55-minute class period. Forty-three of those classes met for 110 minutes each day.

Collection of Data

Inservice education teachers and guidance counselors were pretested with the Minnesota Teacher Attitude Inventory on August 18, 1971, prior to receiving inservice instruction and prior to meeting with their assigned class groups for the first time. Teachers were posttested with the M.T.A.I. on May 17, 1972, at the final session of the inservice education class.

Results from the Minnesota Teacher Attitude Inventory

The class raw score mean for inservice education teachers was 38.9 on the pretest administration of the Minnesota Teacher Attitude Inventory. Posttest administration of the instrument produced a class raw score mean of 34.5, a mean decline of 4.40 from pretest to posttest. Comparison of pretest to posttest mean scores with the t test resulted in a non-significant t ratio of .507, a t ratio of 2.14 being necessary for significance at the .05 level of confidence.

Findings Relative to Objective 6

Results of testing with the Minnesota Teacher Attitude Inventory indicate that no significant change occurred in the attitudes of teachers toward students as a result of inservice education or the pilot program with long-block-of-time classes. From the data available it can be stated that Objective 6 was not achieved.

OBJECTIVE 7

Statement of Objective 7

The number of large study halls will be reduced from 14 the year immediately preceding the project year to 12 during the first project year.

Description of Instructional Activity

Large study halls consisting of over 100 students located in the library and cafeteria were to be phased out as the Trimester/Modular Scheduling Plan was implemented. To replace these study halls, smaller groups of students were to be assigned to special subject area study groups under the supervision of teachers certificated to teach in those areas.

Reduction in the number of large study halls during the 1971-72 planning-operational year was to represent a token move toward eventual elimination of the large general study hall.

Results of Reduction in Study Halls

The following narrative report relative to achievement of Objective 7 was submitted to the ESEA Title III Project Director by the Principal of Central Senior High School.

> An effort was made to fulfill the requirements of Objective No. 7, but it could not be completely satisfied. One complete study hall was eliminated and one other was cut in size to a great degree. The seventh hour cafeteria study hall could have been combined with the library study hall, which would have met the seventh objective; but, several students involved in athletics were assigned to the cafeteria as well as other students who needed to leave early. Students leaving early from the cafeteria caused less confusion and disturbance than leaving the library; therefore, we did not comply completely with Objective No. 7.

Findings Relative to Objective 7

The objective of reducing the number of large study halls by two and replacing them with smaller supervised study groups was not achieved.

OBJECTIVE 8

Statement of Objective 8

Twenty-one classes will be scheduled to provide longer periods of daily instructional time during the first project year.

Description of Instructional Activity

During the 1971-72 planning-operational year, a total of forty-nine pilot classes in fourteen different subjects, from four departments were scheduled in extended daily class periods which exceeded the traditional 55-minute class period in length. Nine of these classes were scheduled under the sixty-day trimester plan. Forty were scheduled in double-period

TABLE VII

CLASSES SCHEDULED FOR EXTENDED CLASS PERIODS, 1971-72

Class	Number of Sections	Number of Days	Daily Minutes In Class
English II	6	90	110
English III	6	90	110
English IV	3	60	120
Plane and Solid Geometry	4	90	110
Advanced Algebra and Trigonometry	2	90	110
Pre-Calculus Mathematics	2	90	110
Chemistry	2	90	110
General Biology	2	90	110
Advanced Biology	2	90	110
Physics	2	90	110
World History	6	90	110
American History	6	90	110
Government	3	60	60
Sociology	3	60	60

blocks and completed in one, ninety-day semester. Pilot classes are shown in Table VII.

Results of Scheduling Extended Period Classes

Forty-nine pilot classes were successfully scheduled in extended periods of from sixty to one hundred and twenty minutes in length. Nine were scheduled in the sixty-day trimester plan and forty were scheduled in the ninety-day semester plan.

Findings Relative to Objective 8

Objective 8 was fully achieved.

OBJECTIVE 9

Statement of Objective 9

Counselors will assist students in making adjustments to changes in the educational program to the extent that 50% of the students enrolled in the program will indicate by their responses on a student opinionnaire that counseling service was helpful to them in adjusting to changes in the educational program.

Description of Instructional Activity

Three Central High School guidance counselors were regular participants in the inservice education program for project teachers. In addition to the regular inservice education class, they also participated in several other project activities which were planned for counselors and/or administrators. These were:

1. Special orientation meetings for secondary counselors and administrators which were conducted by the Director of Secondary Education and the ESEA Title III Project Director on November 17, and on December 1, 8, and 15, 1971. The purposes of these meetings were (a) to help counselors and administrators become thoroughly acquainted with the rationale and organization of the Trimester/Modular Scheduling Plan, and (b) to initiate discussion and planning for enrolling and scheduling pupils under the T/M Plan.
2. Special planning sessions with district administrators and personnel from Southeast Missouri State College to discuss computer scheduling of the T/M Plan.

3. Three inservice education sessions, two full-day sessions and one two-hour session, conducted by University of Missouri personnel especially for guidance personnel.

In addition, senior high school counselors held several large group schedule orientation sessions for their students and spent many hours in small group or individual counseling sessions which concerned the new scheduling plan.

Collection of Data

Data to evaluate achievement of Objective 9 were gathered from responses to Part II of the Cape Central "Feelings About Your School" Student Opinionnaire. (See Appendix E.) This section of the opinionnaire consisted of fourteen statements designed to sample students' opinions of guidance services at Central High School. Of those fourteen items, responses to those numbered 20, 21, and 22 were used as data to evaluate Objective 9. Students were asked to respond Strongly Disagree, Disagree, Uncertain, Agree, or Strongly Agree to those items which stated:

20. My counselor has helped me understand why we are going to the new kind of schedule at Central.

21. I get plenty of help from my counselor in planning my selection of courses for my needs.

22. My counselor has helped me plan my course sequences under the new scheduling plan.

Results from the Cape Central "Feelings About Your School" Student Opinionnaire, Part II

When the opinionnaire was administered as a pretest between September 22 and October 1, 1971, a total of 465 students responded to items 20 and 21, while 462 responded to item 22. On the post-administration of the

opinionnaire between April 17 and 28, 1972, 427 students responded to items 20 and 21, and 426 responded to item 22. A summary of agreement responses to pre- and post-administration of the opinionnaire, items 20, 21, and 22, is shown in Table VIII.

TABLE VIII

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART II, GUIDANCE SERVICES

	Pretest			Posttest			Pretest/Posttest Change	
Item	Number Responses	Number Agree	Percent Agree	Number Responses	Number Agree	Percent Agree	Agreement Increase	Agreement Decrease
20	465	96	20.6	427	169	39.6	19.0*	
21	465	207	44.5	427	199	46.6	2.1	
22	462	94	20.3	426	197	46.2	25.9*	

*Differences significant at .05 level of confidence.

A sizable increase was noted in the number of posttest agreement responses over the number of pretest agreement responses to items 20 and 22.

The pretest to posttest changes in agreement responses were tested for significance of differences using the chi square technique. Pretest to posttest differences in responses to items 20 and 22 produced highly significant chi square values of 41.94 and 59.76, respectively, a chi square value of 3.84 being necessary for significance at the .05 level of confidence. Although the percentage of agreement responses to item 21 did increase from pretest to posttest, the obtained chi square value from testing of these differences was .33, a value not significant at the .05 level of confidence.

Findings Relative to Objective 9

Significant improvements did occur in the amount of assistance students thought they received from their counselor in helping them adjust to the Trimester/Modular Scheduling Plan. However, even after the change in students' opinions occurred, the number agreeing that they had received assistance from their counselor did not reach the established criterion of fifty percent of the students who responded. Therefore, it must be reported that Objective 9, as stated, was not achieved.

OBJECTIVE 10

Statement of Objective 10

Student attitudes toward teachers, curriculum content, teaching procedures, and toward school in general will be improved.

Description of Instructional Activity

It was hypothesized that the effects of the inservice education program would result in improved teaching practices, and that, as a consequence, the attitudes of students toward their teachers, teaching procedures, curriculum, and school would improve.

It was also hypothesized that students' experiences with the experimental extended period classes would positively affect their attitudes toward school.

Collection of Data

Data to evaluate achievement of Objective 10 were gathered from students' responses to Parts III, IV, V, VI, VII, and VIII of the Cape Central "Feelings About Your School" Student Opinionnaire. These parts of the opinionnaire sampled students' opinions regarding these aspects of the program at Central High School:

Part III: Students' Attitudes Toward Teachers
Part IV: Student-Faculty-Administrator Relationships
Part V: Teaching Procedures
Part VI: Curriculum Content
Part VII: Extracurricular Activities
Part VIII: Identification with School

The opinionnaire was administered as a pretest between September 22 and October 1, 1971, and as a posttest between April 17 and 28, 1972.

Results from the Cape Central "Feelings About Your School" Student Opinionnaire, Parts III and IV

The first part of Objective 10 sought improvement in students' attitudes toward teachers. Parts III and IV of the Cape Central "Feelings About Your School" Student Opinionnaire sampled students' opinions regarding teachers (Part III) and toward student-faculty-administrator relationships (Part IV). Students were asked to respond Strongly Agree, Agree, Uncertain, Disagree, or Strongly Disagree to six statements regarding teachers in Part III, and to eight statements regarding student-faculty-administrator relationships in Part IV.

Responses to Part III: Students' Attitudes Toward Teachers. The six statements included in Part III of the opinionnaire were:

34. My teachers are concerned about my learning progress.
35. My teachers make an effort to get to know me.
36. My teachers like their students.
37. Most students in my classes respect their teachers.
38. My teachers know their subject matter thoroughly.
39. My teachers have the ability to communicate with students so we learn.

Degrees of agreement or disagreement were disregarded in summarizing responses to Part III. Agreement responses indicated that students held favorable attitudes toward their teachers. The numbers and percentages of agreement responses to the pretest and the posttest are summarized in Table IX.

Nearly three-fourths of those responding to both the pretest and the posttest agreed that their teachers were thoroughly knowledgeable

of the subject matter they taught. Slightly more than half agreed that their teachers had the ability to communicate their subject to the students. Slightly fewer than half of the respondents thought that teachers liked their students and that students respected their teachers. Only about one in three respondents believed that their teachers made an effort to get to know them, or were concerned about their learning progress.

TABLE IX

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART III, STUDENTS' ATTITUDES TOWARD TEACHERS

	Pretest			Posttest			Pretest/Posttest Change	
Item	Number Responses	Number Agree	Percent Agree	Number Responses	Number Agree	Percent Agree	Agreement Increase	Agreement Decrease
34	462	190	41.1	426	141	33.1		8.0*
35	464	162	34.9	426	152	35.7	.8	
36	464	203	43.8	426	209	49.1	5.3	
37	464	227	48.9	426	194	45.5		3.4
38	464	344	74.1	426	302	70.9		3.2
39	464	246	53.0	426	220	51.6		1.4

*Attitude change significant. Chi square value = 9.16. Value of 3.84 required for significance at .05 level of confidence.

The only significant pretest to posttest change in students' attitudes toward their teachers was in their perceptions of teachers' concerns for their learning progress. Eight percent fewer respondents agreed on the posttest, than agreed on the pretest, that their teachers were concerned about their learning progress. This change in attitude was tested for significance using chi square. The resulting chi square

value of 9.16 was significant when interpreted at the .05 level of confidence, a value of 3.84 being required for significance.

Responses to Part IV: Student-Faculty-Administrator Relationships. The eight statements included in Part IV of the opinionnaire were:

40. Teachers and administrators are consistent in their day-to-day expectations for student behavior and conduct.

41. All students in this school are treated fairly and impartially.

42. I feel I can voice my complaints about school in a reasonable way without fear of reprisal from teachers or administrators.

43. Student opinion has an influence on school policy.

44. Administrators in this school are approachable.

45. Central's administrators show concern about the needs and problems of individual students.

46. High school students are treated like young adults in this school.

47. Teachers and administrators seem to have an understanding of the changes in society which are affecting the attitudes of youth.

Degrees of agreement or disagreement were disregarded in summarizing responses to Part IV. Agreement responses indicated that students held favorable attitudes toward their relationship with their teachers and administrators. The numbers and percentages of agreement responses to items forty through forty-seven are summarized in Table X.

Students, generally, expressed negative opinions of their relationships with their teachers and administrators. On only two statements did as many as one-third of the respondents express agreement; that teachers and administrators were consistent in their day-to-day expectations of student conduct, and that they were treated like young adults

by their teachers and administrators. Fewer than one respondent in five agreed that teachers and administrators understood changes in contemporary society which were affecting young people, that administrators were concerned about students' needs, that students could voice complaints in a reasonable way without fear of reprisal, or that all students at Central were treated fairly and impartially. Students were most negative concerning fair and impartial treatment of students. Only about one respondent in ten agreed that students at Cape Central were treated fairly and impartially.

TABLE X

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART IV, STUDENT-FACULTY-ADMINISTRATOR RELATIONSHIPS

	Pretest			Posttest			Pretest/Posttest Change	
Item	Number Responses	Number Agree	Percent Agree	Number Responses	Number Agree	Percent Agree	Agreement Increase	Agreement Decrease
40	464	203	43.8	426	162	38.0		5.6
41	464	61	13.1	426	43	10.1		3.0
42	464	79	17.0	426	79	18.5	1.5	
43	464	103	22.2	426	86	20.2		2.0
44	464	100	21.6	426	123	28.9	7.3*	
45	464	75	16.2	426	79	18.5	2.3	
46	464	153	33.0	426	142	33.3	.3	
47	464	68	14.7	426	77	18.1	3.4	

*Attitude change significant. Chi square value = 7.08. Value of 3.84 required for significance at the .05 level of confidence.

Only one significant pretest to posttest change in student opinion occurred. At the time of pretesting only 21.6 percent of the students who responded agreed that their administrators were approachable.

Posttest results revealed that 28.9 percent agreed administrators were approachable, an increase of 7.3 percent. While fewer than three in ten respondents to the posttest thought their administrators were approachable, this did represent a significant increase in agreement responses over the pretest. The pretest to posttest chi square comparison of responses to item forty-four resulted in a chi square value of 7.08, significant at the .05 level of confidence.

Findings Relative to Students' Attitudes Toward Teachers

Only two significant pretest to posttest changes in students' opinions were found in Parts III and IV of the Cape Central "Feelings About Your School" Student Opinionnaire. Significantly fewer students thought their teachers were concerned about their learning progress at the time of posttesting than when pretests were administered. However, by the time of posttesting a significantly larger percentage of students had come to believe that their administrators were approachable.

No other pretest/posttest comparisons of responses indicated changes in students' opinions of their teachers and administrators greater than that which could be attributed to chance, alone.

It cannot be stated that the part of Objective 10 dealing with improvement of students' attitudes toward their teachers was achieved.

Results from the Cape Central "Feelings About Your School" Student Opinionnaire, Part V

A second goal stated in Objective 10 was to improve students' attitudes toward teaching procedures. Pretest and posttest responses of project students to Part V of the Cape Central "Feelings About Your

School" Student Opinionnaire sought to detect students' perceptions of teaching procedures. Examination of the eight statements included in Part V, Teaching Procedures, will reveal that the information sought in this section of the opinionnaire differs from the information sought in Part I, Inquiry and Discovery Techniques. Part V addressed itself more to the management aspect of classroom instruction. As in other parts of the opinionnaire, students were asked to express five degrees of agreement with the statements listed.

Responses to Part V: Teaching Procedures. The eight statements included in Part V of the opinionnaire were:

48. My teachers take into consideration individual differences between students when planning lessons.

49. My teachers prepare thoroughly.

50. The classes I am taking are taught in an interesting way.

51. Time in class is scheduled so we have a chance to learn through several different kinds of class activities.

52. In my classes we usually get results back quickly from the tests we take.

53. In my classes tests are frequently used as learning experiences.

54. In this school the purpose most teachers have for giving tests is to flunk out the poorer students.

55. Assignments in my classes are thoroughly explained so I know what is expected of me.

Agreement responses to items 48, 49, 50, 51, 52, 53, and 55 indicated positive attitudes toward teaching procedures. A disagreement response to item 54 indicated a positive attitude toward these procedures.

Degrees of agreement or disagreement were disregarded in summarizing data collected from Part V. The numbers and percentages of agreement responses to both the pretest and the posttest are summarized in Table XI.

TABLE XI

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART V, TEACHING PROCEDURES

	Pretest			Posttest			Pretest/Posttest Change	
Item	Number Responses	Number Agree	Percent Agree	Number Responses	Number Agree	Percent Agree	Agreement Increase	Agreement Decrease
48	461	71	15.4	427	76	17.8	2.4	
49	461	262	56.8	427	246	57.6	.8	
50	461	169	36.7	427	142	33.3		3.4
51	461	189	41.0	427	170	39.8		1.2
52	461	195	42.3	427	217	50.8	8.5*	
53	461	215	46.6	427	176	41.2		5.4
54**	461	38	8.2	427	52	12.2	4.0	
55	461	161	34.9	427	202	47.3	12.4*	

*Attitude change significant. Chi square value No. 52 = 6.88. Chi square value No. 55 = 13.13. Value of 3.84 required for significance at the .05 level of confidence.

**Disagreement response indicates a positive attitude.

Respondents to Part V of the opinionnaire expressed their highest percentage of agreement with the statement that teachers prepared their lessons thoroughly. Almost six of every ten respondents agreed with item 49.

By the time of posttest administration of the opinionnaire, one-half of the respondents also agreed that their tests were being scored and returned to them quickly.

Students indicated a highly positive attitude toward one aspect of teaching procedures by disagreeing with the statement that most

teachers gave tests for the purpose of failing the poorer students. Only about one student in ten agreed with that statement, item 54, while about three of every four students disagreed with it.

The most negative opinions expressed by students were with regard to teachers considering individual differences between students in planning instruction. Fewer than one respondent in five agreed that teachers did consider individual differences in lesson planning.

Respondents changed their responses significantly to only two statements between the pre- and post-administration of the opinionnaire. The proportion of posttest respondents, who agreed that teachers explained assignments so thoroughly that students understood what they were to do, increased by 12.4 percent over the pretest responses. This pretest to posttest shift in responses was statistically significant at the .05 level of confidence. This pretest/posttest comparison of responses produced a chi square value of 13.13, a value of 3.84 being required for significance. This significant shift in students' opinions regarding item 55 agreed with the expression of opinion recorded to item 2 (see Objective 4) where a significantly larger proportion agreed on the posttest that course and assignment objectives were explained by teachers so they were thoroughly understood by students. Apparently, inservice instruction for teachers on writing behaviorally stated objectives did significantly improve teachers' abilities to relate the purposes and processes of instruction in a way students could understand.

The proportion of students who believed their tests were quickly scored and returned increased from pretest to posttest by 8.5 percent.

This pretest/posttest change in responses was also statistically significant, producing a chi square value of 6.88. This quicker scoring and returning of tests may have been due, in part, to the scoring services provided for teachers by the ESEA Title III Project Office.

Findings Relative to Students' Attitudes Toward Teaching Procedures

Since students' perceptions of teaching procedures did show some improvement on five of the eight opinionnaire items in Part V, and since two of these improvements were statistically significant, it may be stated that the part of Objective 10 dealing with improving students' attitudes toward teaching procedures was achieved to some degree.

Results from the Cape Central "Feelings About Your School" Student Opinionnaire, Part VI

A third goal stated in Objective 10 was to improve students' attitudes toward curriculum content. Pretest and posttest responses of project students to Part VI of the Cape Central "Feelings About Your School" Student Opinionnaire were designed to sample students' opinions regarding the relevance, difficulty, and breadth of curricular offerings at Central High School.

Responses to Part VI: Curriculum Content. Part VI of the opinionnaire included six statements.

56. The things we learn in our classes are important and worthwhile. They are relevant to my present and future needs.

57. My classes are too hard and my teachers are too demanding.

58. Classes at Central are too easy. Teachers don't push us hard enough.

59. Central's class schedule has enough flexibility so I can usually get the courses I want to take.

60. The curriculum offered here is broad enough to include the courses I want and/or need.

61. I am satisfied with my learning program at Central High School.

Agreement responses to items 56, 59, 60, and 61 indicated favorable attitudes toward the curriculum. Disagreement responses to items 57 and 58 were expressions of favorable attitudes toward the curriculum.

Degrees of agreement or disagreement were disregarded in summarizing responses to Part VI. The numbers and percentages of agreement responses are summarized in Table XII.

TABLE XII

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART VI, CURRICULUM CONTENT

	Pretest			Posttest			Pretest/Posttest Change	
Item	Number Responses	Number Agree	Percent Agree	Number Responses	Number Agree	Percent Agree	Agreement Increase	Agreement Decrease
56	461	165	35.8	427	162	37.9	2.1	
57**	461	75	16.3	427	60	14.1		2.2
58**	461	26	5.6	427	35	8.2	2.6	
59	461	285	61.8	427	270	63.2	1.4	
60	465	300	64.5	427	244	57.1		7.4*
61	465	242	52.0	427	199	46.6		5.4

*Attitude change significant. Chi square value = 7.08. Value of 3.84 required for significance at .05 level of confidence.

**Disagreement response indicates a positive attitude.

Students' attitudes were generally most favorable toward the extent of course offerings in the curriculum, and their opportunities to enroll

in these courses. Well over one-half of the respondents to Part VI agreed that the curriculum was broad enough to offer the courses they needed or wanted, and the schedule offered enough flexibility so they could enroll for these courses.

About one-half of the respondents stated that they were satisfied with the learning program at Central High School.

A sizable majority of those responding to Part VI refused to agree that their courses were either too difficult or too easy. Apparently, most respondents believed the level of difficulty in their courses was about right.

Response changes to only one statement, item 60, were great enough to be statistically significant at the .05 level of confidence. More than seven percent of those responding decided between the time of pretesting and posttesting that curricular offerings at Cape Central were not extensive enough to meet their needs. This shift in opinions produced a chi square value of 7.08 which was significant at the established level of confidence.

Findings Relative to Students' Attitudes Toward Curriculum Content

Student responses to Part VI of the Cape Central "Feelings About Your School" Student Opinionnaire failed to produce any evidence that students' attitudes toward the curriculum improved during the year as a result of project activities. It can be stated that the part of Objective 10 which sought improvement in the attitudes of students toward curriculum content was not achieved.

Results from the Cape Central "Feelings About Your School" Student Opinionnaire, Parts VII and VIII

The fourth goal stated in Objective 10 sought the improvement of students' attitudes toward school in general. After discussion by the committee which constructed the Cape Central "Feelings About Your School" Student Opinionnaire, regarding a definition of the term "school in general," it was agreed that student opinion had been sampled by the opinionnaire for all major segments of the school program except extracurricular activities. While the ESEA Title III Project had no direct relationship to this part of the educational program, it was agreed the activities program often has a greater influence on students' attitudes toward their school than course offerings or methods of instruction. Consequently, Part VII of the opinionnaire was constructed to sample students' attitudes toward the extracurricular activities program.

Part VIII of the opinionnaire consisted of three general statements intended to sample students' attitudes with regard to their feelings of belonging, pride, and satisfaction with their school.

Responses to Part VII: Extracurricular Activities. Part VII of the opinionnaire included five statements.

62. Student activities at Central are open to every student.

63. I have plenty of opportunity to participate in school activities.

64. The activity program at Central is varied enough to provide something interesting and worthwhile for every student.

65. A few students dominate all of the clubs and other activities in this school.

66. Central puts too much emphasis on social life and activities and not enough on learning and scholarship.

Agreement responses to items 62, 63, and 64 indicated favorable attitudes toward the extracurricular activities program, while disagreement responses to items 65 and 66 were indicants of favorable attitudes.

Degrees of agreement or disagreement were disregarded in summarizing responses to Part VII. The numbers and percentages of agreement responses are summarized in Table XIII.

TABLE XIII

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART VII, EXTRACURRICULAR ACTIVITIES

	Pretest			Posttest			Pretest/Posttest Change	
Item	Number Responses	Number Agree	Percent Agree	Number Responses	Number Agree	Percent Agree	Agreement Increase	Agreement Decrease
62	465	287	61.7	427	194	45.4		16.3*
63	465	333	71.6	427	246	57.6		14.0*
64	465	285	61.3	427	200	46.8		14.5*
65**	465	284	61.1	427	281	65.8	4.7	
66**	465	80	17.2	427	92	21.5	4.3*	

*Attitude change significant. Chi square value No. 62 = 25.31. Chi square value No. 63 = 17.93. Chi square value No. 64 = 13.81. Chi square value No. 66 = 4.47. Value of 3.84 required for significance at .05 level of confidence.

**Disagreement response indicates positive attitude.

At the time of pretesting respondents, generally, expressed positive attitudes toward every aspect of the activity program which was sampled with one exception. Sixty-one percent of the pretest respondents expressed a belief that extracurricular activities were dominated by a few students, while only about twenty percent said they were not.

More than sixty percent of the pretest respondents expressed favorable attitudes toward the extracurricular activities program on each of the other four statements in Part VII of the opinionnaire.

Between the time of pre- and post-administration of the opinionnaire, a significant shift in students' attitudes toward the activity program occurred. By the time posttests were administered, students' responses to every item in Part VII of the opinionnaire had become more negative. Four of these negative pretest to posttest shifts in attitude were statistically significant at the .05 level of confidence. The chi square values resulting from pretest/posttest comparisons of students' responses for items 62, 63, 64, and 66 were 25.31, 17.93. 13.81, and 4.47, respectively. While responses to item 65 showed a negative pretest to posttest shift in attitudes, the shift was not so great that it could not be attributed to random variation, alone, at the .05 level of confidence.

In summary, at the time of posttesting significantly fewer respondents were willing to agree that activities were open to all students, that they had ample opportunity to participate, or that the activity program offered something interesting and worthwhile for every student. Significantly more posttest respondents expressed a belief that Central High School placed too much emphasis on social life and not enough on scholarship. By the time of posttesting students' opinions agreed, even more than on the pretest, that a few students tended to dominate all of the activities.

Responses to Part VIII: Identification with School. Part VIII of the opinionnaire included only three statements.

67. I feel I "belong"--have an identity and am somebody--here at Central.

68. Students here take pride in Central High School and are proud of the school's accomplishments.

69. Students at Central are satisfied with their school.

Agreement responses were considered favorable responses to items in Part VIII. As in the other sections of the opinionnaire, degrees of agreement or disagreement were disregarded in summarizing results. The numbers and percentages of agreement responses to Part VIII are shown in Table XIV.

TABLE XIV

SUMMARY OF RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE, PART VIII, IDENTIFICATION WITH SCHOOL

	Pretest			Posttest			Pretest/Posttest Change	
Item	Number Responses	Number Agree	Percent Agree	Number Responses	Number Agree	Percent Agree	Agreement Increase	Agreement Decrease
67	465	231	49.7	427	202	47.3		2.4
68	465	245	52.7	427	183	42.9		9.8*
69	465	129	27.7	427	109	25.5		2.2

*Attitude change significant. Chi square value = 10.17. Value of 3.84 required for significance at .05 level of confidence.

By the time posttests were administered, slightly fewer than one-half of the students who responded said they felt a sense of belonging at Central, or that students took pride in the accomplishments of the school. Only about one respondent in four expressed a belief that students were satisfied with their school.

While the percentage of agreement responses to all three statements in Part VIII declined between pretesting and posttesting, responses to only one, item 68, declined significantly. When pretest responses were compared to posttest responses on this item, it was found that 9.8 percent fewer posttest respondents agreed that students at Central were proud of their school and its accomplishments. This pretest/posttest comparison of responses produced a chi square value of 10.17 which was statistically significant at the .05 level of confidence.

Findings Relative to Students' Attitudes Toward School in General

As a result of responses to Parts VII and VIII of the Cape Central "Feelings About Your School" Student Opinionnaire, it appears that students' attitudes toward school in general not only failed to improve during the 1971-72 school year, they, in fact, became more negative. That part of Objective 10 concerned with improving students' attitudes toward school in general was not achieved.

SUMMARY OF ACHIEVEMENT OF OBJECTIVES

Objective 1

Each teacher will gain proficiency in conducting classes with interaction to reduce teacher verbalization of instruction to 60% or less within one academic year. — Achieved

Objective 2

Teachers will, within one year, improve their skills in constructing objective tests to measure the results of their instruction to the point that item analysis will reveal less frequency of invalid questions. — Achieved

Objective 3

Teachers' instructional processes will be changed to reduce teacher dominance by 15% in the first year. — Achieved

Student participation in classroom verbal interaction will increase by 15% during the year: (a) Increase in student initiated responses. (b) Increase in student initiated questions — Achieved

Objective 4

During the first year teachers will develop the ability to apply inquiry and discovery techniques in their classrooms to the point that 75% of the students and 100% of the supervisors will realize that instruction of this nature has been increased. — Not Achieved

Objective 5

Teachers will learn to work together cooperatively in planning for team teaching to the extent that each team leader and the project director will evaluate each teacher as working cooperatively in team planning by the end of the first year. — Not Achieved

Objective 6

Teachers' attitudes toward teaching and students, as measured by the Minnesota Teacher Attitude Inventory, will reveal a more positive attitude toward students on at least 20% of the test items after one year of participation in this project. — Not Achieved

Objective 7

The number of large study halls will be reduced from 14 the year immediately preceding the project year to 12 during the first project year. — Not Achieved

Objective 8

Twenty-one classes will be scheduled to provide longer periods of daily instructional time during the first project year. — Achieved

Objective 9

Counselors will assist students in making adjustments to changes in the educational program to the extent that 50% of the students enrolled in the program will indicate by their responses on a student questionnaire that counseling service was helpful to them in adjusting to changes in the educational program. — Not Achieved

Objective 10

Student attitudes toward teachers, curriculum content, teaching procedures, and toward school in general will be improved.

Toward teachers	Not Achieved
Toward curriculum	Not Achieved
Toward teaching procedures	Achieved
Toward school in general	Not Achieved

PART III

REPORT OF DISSEMINATION ACTIVITIES

REPORT OF DISSEMINATION ACTIVITIES

Dissemination of information concerning this project took place through oral and audio-visual presentations to student groups, parent seminars, civic and service clubs, state meetings of the Missouri School Boards Association and the Missouri Association of School Administrators, and other groups; through news articles published in local newspapers and the high school newspaper; through publication of a Weekly Newsletter of ESEA Title III Project Activities; through news releases to local broadcasting companies; through publication of an article in a statewide bulletin for secondary school principals; through publication and distribution of a descriptive brochure; through replies to letters of inquiry about the project; and through visits to the project by interested educators and citizens.

TABLE XV

SUMMARY OF DISSEMINATION ACTIVITIES

Method of Dissemination	Occurrences
Oral and Audio-Visual Presentations	
To Student Groups	10
To Parent Groups	4
To Civic and Service Groups	6
To MSBA and MASA State Conventions	1
To Other Groups	4
Newsletters, Issues Published	36
Newspaper Items (Record incomplete)	20+
Radio and Television Announcements (Record incomplete)	30+
Articles in Statewide Professional Bulletins	1
Published Brochures	1
Project Visits from Interested Educators and Citizens (Record incomplete)	8+
Replies to Letters of Inquiry (Record incomplete)	5+

Most of these dissemination efforts are summarized in Table XV, above, and are reported in more detail in the Report of Dissemination Activities which accompanies this Interim Report.

Success of Dissemination Activities

Most dissemination activities were well received. Interest in the project, especially in the Trimester/Modular Scheduling Plan, has been high. Acceptance has, generally, been favorable.

Many of the student groups to whom oral presentations were made were initially hostile. However, before presentations were completed, group attitudes usually became much more receptive. The one exception was the presentation before the Central High School Student Council early in the year (September 30) where the speaker was met by a very hostile audience, many of whom walked out before the initial presentation was completed.

The two special seminars held for parents were failures because, despite ample announcement through the news media, very few parents attended.

APPENDIX A

SCHEDULE OF INSERVICE CLASS SESSIONS AND TOPICS

SESSION	DATE	TOPIC
1	September 1	Introduction to Classroom Verbal Interactive Behavior
2	September 8	Introduction to the VIB Coding System
3	September 15	Skill Development in Coding Classroom VIB
4	September 22	Skill Development in Coding Classroom VIB
5	September 29	VIB Matrix Conversion
6	October 6	Matrix Interpretation
7	October 13	Introduction to Stating Instructional Objectives in Behavioral Terms
8	October 20	Writing Behaviorally Stated Instructional Objectives
9	October 27	Writing Behaviorally Stated Instructional Objectives
10	November 10	Measurement and Evaluation: Types of Test Items
11	November 17	Measurement and Evaluation: Evaluating Different Levels of Cognition
12	December 1	Measurement and Evaluation: Evaluating Learning in the Affective Domain
13	December 8	Measurement and Evaluation: Test Item Analysis and Validity
14	December 15	Measurement and Evaluation: Test Reliability
15	January 5	Measurement and Evaluation: Measures of Central Tendency and Dispersion
16	January 12	Measurement and Evaluation: Errors of Measurement
17	January 26	Introduction to Individualizing Instruction

SESSION	DATE	TOPIC
18	February 2	Team Teaching: One Approach to Facilitating Individualized Instruction
19	February 9	Team Teaching and the Differentiated Staffing Model
20	February 16	Individualized Instruction
21	March 1	Mastery Learning
22	March 1	Introduction to Construction of Mastery Learning Pacquettes
23	March 15	Organization of Mastery Learning Pacquettes Special Meeting for Guidance Counselors: Setting Goals for the Guidance Program
24	March 22	Use of Media in Classroom Instruction
25	April 5	Inquiry Teaching
26	April 12	Micro-Teaching
27	April 12	Micro-Teaching
28	April 19	Micro-Teaching
29	April 26	Non-Verbal Communication in the Classroom Special Session for Guidance Counselors and Vocational Teachers: Counseling for Vocational Education Pupils
30	May 3	Mastery Learning Pacquette Construction Special Session for Guidance Counselors: Counseling for Students with Learning Problems
31	May 10	Pacquette Construction and Evaluation for Inservice Education Program
32	May 17	Posttesting of Inservice Education Teachers and Culminating Activities
32	May 22	Special Session for Guidance Counselors and Vocational Teachers: Improving Career Counseling for Vocational Education Students

APPENDIX B

INSERVICE EDUCATION CLASS ROSTER AND ATTENDANCE RECORD

TEACHER	PRESENT	ABSENT
Aeschlimann, Lawrence	31	1
Austin, Frances	27	5
Braun, Sharron	25	8
Cannon, Norval	11	Dropped from class, 12-1-71
Crowley, Polly	31	1
Decker, John	29	3
Gau, Robert	32	0
Johnson, Norris	31	1
Knight, Robert	26	6
Long, Raymond	26	6
Lynch, Sheilah	28	4
Muegge, Alta	31	1
Nickell, Frank	31	1
Phillips, Ford	29	3
Plunk, Everett	32	0
Profilet, Karen	30	2
Sackman, Kathryn	9	Dropped from class, 11-10-71
Sadler, Alene	29	3
Scherer, Charlotte	32	0
Schrader, Betty	31	1
Schuch, Tony	30	2
Sivia, Mary	32	0
Snider, Gail	30	2
Thomas, Jay	31	1
Williams, Grace	30	2
Witvoet, Jerry	28	4
Woemmel, Jerry	30	2
East, William (Counselor)	26	6
Meier, Dale (Counselor)	20	12
Snider, Margaret (Counselor)	30	2

A PROPOSED TECHNIQUE FOR GENERALIZING VIB MATRIX RESULTS

I. The Matrix

The VIB Matrix is formed by eleven columns and eleven rows which form one hundred twenty one cells. Each cell contains three bits of information:

(1) the cell frequency

(2) the percent of total observations entered in the cell

(3) cell difference from "Key" or other standard.

II. Useable, Descriptive Expressions:

Though there is a great deal of information held within the cell and column figures, it is difficult to draw general conclusions while the data are in this form. It is desirable to have statements or expressions which quantify the matrix in more general, easily interpreted terms. The generalizing statements need to be sufficient in number to describe each of the classroom qualities in which we have expressed a high degree of interest and that we consider to be likely dependent variables. To meet the need outlined above, the following five indices are submitted for your consideration.

III. Five Proposed Indices

To express the various qualities of classroom verbal interactive behavior in a quantitative way, the tally totals of selected matrix areas can be combined and compared with the total number of observations so the value of the ratio will reflect:

(1) the degree of student participation

(2) the frequency of speaker change

(3) the frequency of encouragement offered by the teacher

(4) the degree to which the teacher dominated the discussion

(5) the effectiveness of teacher talk to stimulate student participation

Index One: The Student Involvement Index is calculated by summing columns one, two, and three, and dividing the total number of observation.

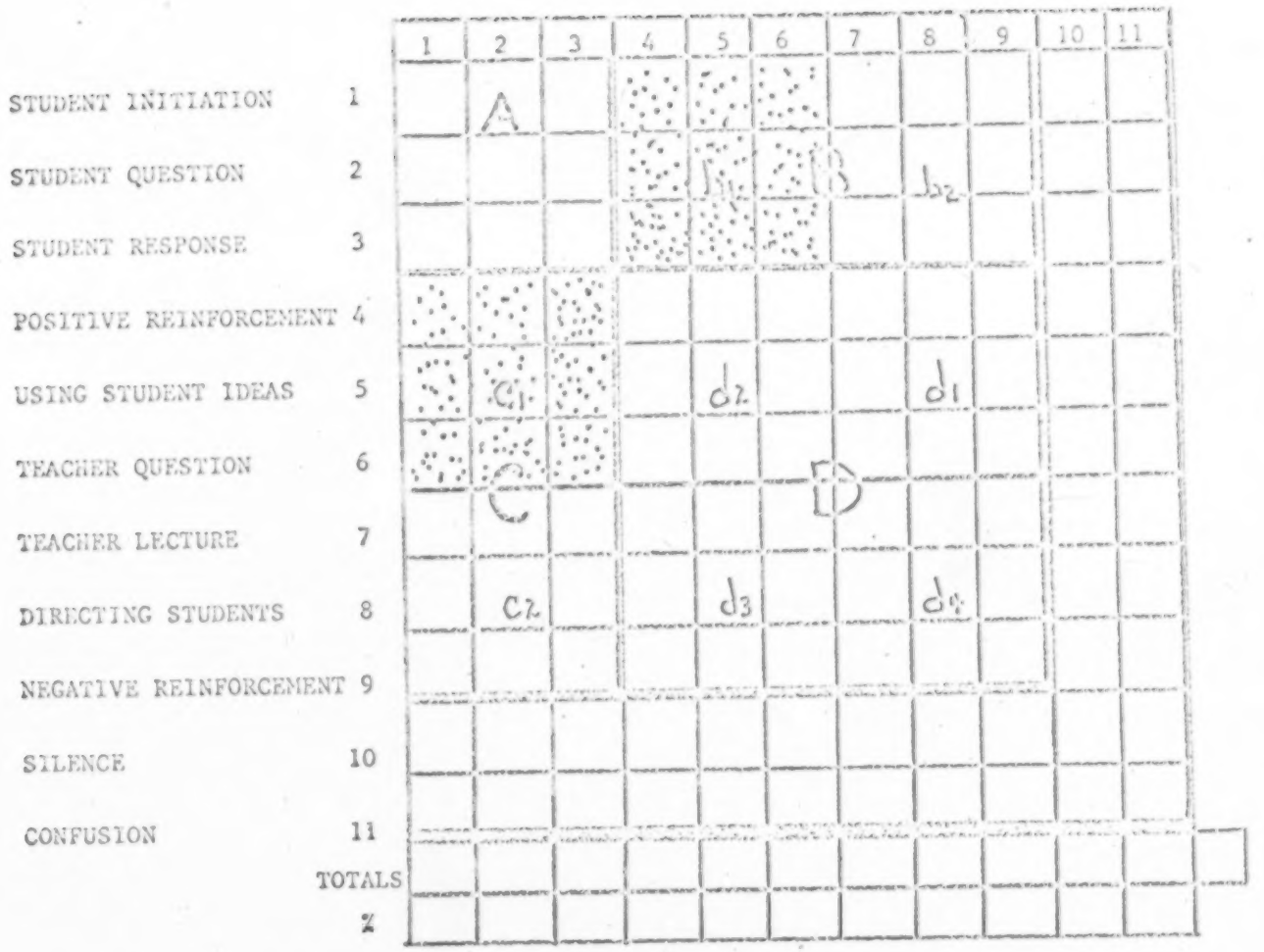
Index Two: The Speaker Change Index is calculated by summing those areas which involve either the teacher giving-granting the floor to student or a student yielding to the teacher. The "B" and "C" areas describe this condition; their sum is divided by the total number of matrix tallies to calculate Index Two.

Index Three: The Encouragement Index compares the sums of column totals four, five, and six to the sum of columns four through nine. This ratio forms the fraction of the teacher talk which encourages student participation.

Index Four: The Domination Index is the ratio of the total teacher talk to the total number of observations: columns four through nine divided by columns one through eleven

Index Five: The Effectiveness Index is the ratio of the tallies on area "C" to the sum of columns four through nine. This is the ratio of the number of teacher-talk tallies that were followed by a student response to the total number of teacher-talk observations.

VIB ANALYSIS MATRIX



Appendix D

I.B.S. - STUDENT QUESTIONNAIRE ABOUT CLASSROOM PRACTICES

Directions:

This is a questionnaire to determine your opinions and feelings about the instruction of this course. Please answer all questions by circling your choice.

EXAMPLE

Agree=A Moderately Agree=MA Undecided=U Moderately Disagree=MD Disagree=D

The content studied in this course is complex. A (MA) U MD D

PLEASE RESPOND TO EVERY ITEM.

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Agree=A Moderately Agree=MA Undecided=U Moderately Disagree=MD Disagree=D

1. My task in class usually is to take notes on the presentation and memorize the material for a test. A MA U MD D

2. We are given enough time in class to talk among ourselves about the ideas of this course. A MA U MD D

3. Over 50% of our class time is spent in answering questions that are in the textbooks or in the studyguides. A MA U MD D

4. Classroom laboratory or study activities, such as experiments, demonstrations, role playing, are usually performed by fellow students rather than by my teacher. A MA U MD D

5. If I don't agree with my teacher's point of view, I refrain from disagreeing with him. A MA U MD D

6. Most of the questions we ask in class are to clarify what the text or teacher has presented to us. A MA U MD D

7. We often discuss the kind of evidence that is behind the "truths" presented in this course. A MA U MD D

8. A large portion of class time is spent listening to our teacher tell us about the material. A MA U MD D

9. My teacher openly admits his mistakes. A MA U MD D

10. If there is a disagreement among students during a discussion, the teacher usually serves as a moderater, clarifying the issues on each side but avoiding to give a judgment of who is correct. A MA U MD D

Agree=A Moderately Agree=MA Undecided=U Moderately Disagree=MD Disagree=D

11. The class discussions are dull because the teacher often repeats almost exactly what the textbook says. A MA U MD D

12. A frequent question raised by my teacher during class discussions concerns an explanation of the meaning of a statement, paragraph, graph, diagram, equation, etc. A MA U MD D

13. My teacher often asks questions that cause us to think about ideas that we have previously studied. A MA U MD D

14. My teacher gives us unit or chapter objectives at the beginning of the unit that tells us what we are supposed to learn from the study of that unit. A MA U MD D

15. When reading the text, we are expected to learn most of the details that are stated there. A MA U MD D

16. We frequently are required to write our definitions to word lists. A MA U MD D

17. When reading the textbook we are expected to look for the main problems and for the evidence that support them. A MA U MD D

18. The teacher tries to make certain that we understand the general objectives (purposes) of each lesson before we begin work on the lesson. A MA U MD D

19. My teacher encourages differing viewpoints on issues relative to subject matter. A MA U MD D

20. The daily assignments the teacher makes seems to me to be mostly "busywork". A MA U MD D

Agree=A Moderately Agree=MA Undecided=U Moderately Disagree=MD Disagree=D

21. Our teacher tries to teach us how to ask ourselves questions about statements made in the text.	A	MA	U	MD	D
22. My notes from the class serves as the primary study material for unit examinations.	A	MA	U	MD	D
23. My teacher feels that open-book examinations are of little value, and therefore does not give them.	A	MA	U	MD	D
24. We often read subject-related material in books and periodicals outside of class.	A	MA	U	MD	D
25. My teacher feels that learning will be increased if we outline the textbook.	A	MA	U	MD	D
26. Our tests include many questions based upon the unit objectives provided by the teacher at the beginning of the unit.	A	MA	U	MD	D
27. Definitions are important to learning this subject because they usually appear on each test.	A	MA	U	MD	D
28. Our tests usually ask us to relate ideas that we have learned at different times.	A	MA	U	MD	D
29. A question on a test that asks you to think up and state ways of looking for solutions to an unfamiliar problem is fair.	A	MA	U	MD	D
30. The practice of discussing the test in class the next day is a good learning experience.	A	MA	U	MD	D
31. It is easier to take notes when the teacher uses the overhead projector then when she/he uses the blackboard.	A	MA	U	MD	D

Agree=A Moderately Agree=MA Undecided=U Moderately Disagree=MD Disagree=D

32. The films used in this class are valuable because they supply additional depth to the topic being studied.	A	MA	U	MD	D
33. I find the film-loops, film-strips, and transparencies the teacher uses are helpful aids to understanding the textbook.	A	MA	U	MD	D
34. Teacher led discussions in this class involves about 80% of the class.	A	MA	U	MD	D
35. Homework assignments are usually clearly related to the objectives for the unit.	A	MA	U	MD	D
36. If my teacher maintains eye-contact with me while I am answering a question posed by him, I feel he is interested in my answer.	A	MA	U	MD	D
37. My teacher takes time to speak to me outside of class and outside of school, because of this I feel she (he) is interested in me as a person.	A	MA	U	MD	D
38. I feel that subject matter can be learned most effectively by letting the teacher "do his thing" that is, explain what the subject is all about.	A	MA	U	MD	D
39. I feel that subject matter can be learned most effectively by letting the student explore and "dig-out" the answers with guidance and direction provided by the teacher.	A	MA	U	MD	D
40. I think my teacher feels it is his/her task to tell us about the subject.	A	MA	U	MD	D
41. My teacher frequently discourages rather than encourages student participation during class.	A	MA	U	MD	D

Agree=A Moderately Agree=MA Undecided=U Moderately Disagree=MD Disagree=D

42. Films, audio-tapes, filmstrips, or some type of audio-visual equipment is used in this class about once a week.	A	MA	U	MD	D
43. My teacher often uses or extends one of my ideas to explain and clarify the idea or concept.	A	MA	U	MD	D
44. My teacher never condemns a student for a comment or response he makes in class.	A	MA	U	MD	D
45. My teacher is warm and friendly in his class contact with his students.	A	MA	U	MD	D
46. I do not like to answer discussion questions, because of the teacher's possible negative response if my answer is incorrect.	A	MA	U	MD	D
47. Films and/or film-loops are used with each unit of study.	A	MA	U	MD	D
48. I feel the teacher does respect our answers to discussions, because she/he often refers to these responses in her/his summarizing remarks.	A	MA	U	MD	D
49. Multiple choice and true-false questions are never used on unit tests.	A	MA	U	MD	D
50. Class discussions infrequently focus upon current issues that relate to the content of the unit.	A	MA	U	MD	D
51. My teacher tends to impose unconsciously his value system upon us.	A	MA	U	MD	D
52. My teacher has a tending to overemphasize rules and regulations and other rigid school controls.	A	MA	U	MD	D

Agree=A Moderately Agree=MA Undecided=U Moderately Disagree=MD Disagree=D

53. My teacher does not "turn-off" students because they have long hair, unusual tastes in clothing and grooming. A MA U MD D

54. My teacher tends to see students not as individuals but as a group. A MA U MD D

55. My teacher frequently conveys through a book, tone of voice, or gesture "high regard" for students in this class. A MA U MD D

Appendix E

THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE

INSTRUCTIONS:

Below are some statements which describe how you might feel about your school and the classes you are in. Do you agree with these statements?.

Complete the opinionnaire as follows below each statement:

If you STRONGLY DISAGREE with the statement, draw a circle around SD.

If you DISAGREE, but not strongly, encircle D.

If you are UNCERTAIN about whether you agree or disagree with the statement, encircle U.

If you AGREE, but not strongly, encircle A.

If you STRONGLY AGREE with the statement, encircle SA.

1. Teachers in my classes clearly define a learning problem then help us students work toward a solution.

SD D U A SA

2. The goals of the course and of each assignment are explained by the teacher and are clearly understood by the students.

SD D U A SA

3. In my classes the teachers do most of the talking.

SD D U A SA

4. My teachers encourage self-expression by students.

SD D U A SA

5. The most common source of information in my classes is the teacher.

SD D U A SA

6. My teachers usually teach us by telling us the things we need to know.

SD D U A SA

7. In my classes we get most of what we are to learn from the textbook.

SD D U A SA

8. My teachers usually do not tell us the answers, but they help guide us in discovering the answers.

SD D U A SA

9. Teachers ask more questions that make us reason out WHY than they do fact questions about WHAT or WHO or WHEN.

SD D U A SA

10. I can get the answers to most of the questions we are asked in class by looking them up in the book.

SD D U A SA

11. My teachers make us think and draw conclusions about problems.

SD D U A SA

12. In my classes we are given the opportunity to help plan our own courses of study.

SD D U A SA

13. We usually learn broad, general ideas in our classes then have to use these to solve specific problems.

SD D U A SA

14. We usually learn by starting with several small, specific facts, then we put these facts together to reach broad conclusions or generalizations.

SD D U A SA

15. Students are given many opportunities to learn on their own.

SD D U A SA

16. I have many assignments which require me to research problems in the library.

SD D U A SA

17. We use many sources of information from which to learn in my classes.

SD D U A SA

18. The way we go about learning at Central will help me become a more self-sufficient person after I graduate.

SD D U A SA

19. In my classes the students are encouraged to communicate with each other to share information and ideas about the lesson.

SD D U A SA

20. My counselor has helped me understand why we are going to a new kind of schedule at Central.

SD D U A SA

21. I get plenty of help from my counselor in planning my selection of courses for my needs.

SD D U A SA

22. My counselor has helped me plan my course sequences under the new scheduling plan.

SD D U A SA

23. I have received valuable assistance from my counselor on career or vocational problems.

SD D U A SA

24. I know my counselor and he/she knows who I am.

SD D U A SA

25. I can get in to see my counselor when I need to.

SD D U A SA

26. My counselor gives me reliable information.

SD D U A SA

27. Counselors at Central treat students as individuals with different personalities and problems.

SD D U A SA

28. A counselor has helped me with a personal problem.

SD D U A SA

29. I feel at ease when discussing a problem with my counselor.

SD D U A SA

30. I feel my counselor can be trusted to keep confidential information he knows about me.

SD D U A SA

31. My counselor has done a good job of interpreting my test scores to me so I know what they mean.

SD D U A SA

32. Test results are used by CHS counselors to help students understand their strengths and weaknesses and to help them make decisions.

SD D U A SA

33. I am satisfied with the guidance and counseling services at Central.

SD D U A SA

34. My teachers are concerned about my learning progress.

SD D U A SA

35. My teachers make an effort to get to know me as an individual.

SD D U A SA

36. My teachers like their students.

SD D U A SA

37. Most students in my classes respect the teacher.

SD D U A SA

38. My teachers know their subject thoroughly.

SD D U A SA

39. My teachers have the ability to communicate with students so we learn.

SD D U A SA

40. Teachers and administrators are consistent in their day-to-day expectations for student behavior and conduct.

SD D U A SA

41. All students in this school are treated fairly and impartially.

SD D U A SA

42. I feel I can voice my complaints about school in a reasonable way without fear of reprisal from teachers or administrators.

SD D U A SA

43. Student opinion has an influence on school policy.

SD D U A SA

44. Administrators in this school are approachable.

SD D U A SA

45. Central's administrators show concern about the needs and problems of individual students.

SD D U A SA

46. High school students are treated like young adults in this school.

SD D U A SA

47. Teachers and administrators seem to have an understanding of the changes in society which are affecting the attitudes of youth.

SD D U A SA

48. My teachers take into consideration individual differences between students when planning lessons.

SD D U A SA

49. My teachers prepare thoroughly.

SD D U A SA

50. The classes I'm taking are taught in an interesting way.

SD D U A SA

51. Time in class is scheduled so we have a chance to learn through several different kinds of class activities.

SD D U A SA

52. In my classes we usually get results back quickly from the tests we take.

SD D U A SA

53. In my classes tests are frequently used as learning experiences.

SD D U A SA

54. In this school the purpose most teachers have for giving tests is to flunk out the poorer students.

SD D U A SA

55. Assignments in my classes are thoroughly explained so I understand what is expected of me.

SD D U A SA

56. The things we learn in our classes are important and worthwhile -- they are relevant to my present and future needs.

SD D U A SA

57. My classes are too hard and my teachers are too demanding.

SD D U A SA

58. Classes at Central are too easy -- teachers don't push us hard enough.

SD D U A SA

59. Central's class schedule has enough flexibility so I can usually get the courses I want to take.

SD D U A SA

60. The curriculum offered here is broad enough to include the courses I want and/or need.

SD D U A SA

61. I am satisfied with my learning program at Central High School.

SD D U A SA

62. Student activities at Central are open to every student.

SD D U A SA

63. I have plenty of opportunity to participate in school activities.

SD D U A SA

64. The activity program at Central is varied enough to provide something interesting and worthwhile for every student.

SD D U A SA

65. A few students dominate all of the clubs and other activities in this school.

SD D U A SA

66. Central puts too much emphasis on social life and activities and not enough on learning and scholarship.

SD D U A SA

67. I feel I "belong" -- have an identity and am somebody -- here at Central.

SD D U A SA

68. Students here take pride in Central High School and are proud of the school's accomplishments.

SD D U A SA

69. Students at Central are satisfied with their school.

SD D U A SA

APPENDIX F

SUMMARY OF PRETEST AND POSTTEST RESPONSES TO THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE

SUMMARY OF THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE

First Semester

PART I, INQUIRY AND DISCOVERY TECHNIQUES

	SD	D	U	A	SA
1. Teachers in my classes clearly define a learning problem then help us students work toward a solution.	30/466 6.4%	118/466 25.3%	121/466 25.9%	181/466 38.8%	16/466 3.4%
2. The goals of the course and of each assignment are explained by the teacher and are clearly understood by the students.	37/466 7.9%	214/466 45.9%	81/466 17.4%	119/466 25.5%	15/466 3.2%
3. In my classes the teachers do most of the talking.	16/466 3.4%	70/466 15.0%	56/466 12.0%	223/466 47.9%	101/466 21.7%
4. My teachers encourage self-expression by students.	23/466 4.9%	85/466 18.2%	97/466 20.8%	215/466 46.1%	46/466 9.9%
5. The most common source of information in my classes is the teacher.	19/466 4.1%	119/466 25.5%	44/466 9.4%	224/466 48.1%	60/466 12.9%
6. My teachers usually teach us by telling us the things we need to know.	23/466 4.9%	127/466 27.3%	79/466 17.0%	204/466 43.8%	33/466 7.1%
7. In my classes we get most of what we are to learn from the textbook.	20/466 4.3%	156/466 33.5%	61/466 13.1%	183/466 39.3%	46/466 9.9%
8. My teachers usually do not tell us the answers, but they help guide us in discovering the answers.	14/466 3.0%	78/466 16.7%	64/466 13.7%	265/466 56.9%	45/466 9.7%
9. Teachers ask more questions that make us reason out WHY than they do fact questions about WHAT or WHO or WHEN.	27/466 5.8%	91/466 19.5%	136/466 29.2%	179/466 38.4%	33/466 7.1%
10. I can get the answers to most of the questions we are asked in class by looking them up in the book.	29/466 6.2%	105/466 22.5%	46/466 9.9%	247/466 53.0%	39/466 8.4%
11. My teachers make us think and draw conclusions about problems.	13/466 2.8%	55/466 11.8%	86/466 18.5%	282/466 60.5%	30/466 6.4%

	SD	D	U	A	SA
12. In my classes we are given the opportunity to help plan our own courses of study.	136/466 29.2%	199/466 42.7%	60/466 12.9%	63/466 13.5%	8/466 1.7%
13. We usually learn broad, general ideas in our classes then have to use these to solve specific problems.	28/465 6.0%	92/465 19.8%	128/465 27.5%	205/465 44.1%	12/465 2.6%
14. We usually learn by starting with several small, specific facts, then we put these facts together to reach broad conclusions or generalizations.	23/465 4.9%	115/465 24.7%	115/465 24.7%	193/465 41.5%	19/465 4.1%
15. Students are given many opportunities to learn on their own.	41/465 8.8%	110/465 23.7%	78/465 16.8%	205/465 44.1%	31/465 6.7%
16. I have many assignments which require me to research problems in the library.	67/465 14.4%	209/465 44.9%	53/465 11.4%	103/465 22.2%	33/465 7.1%
17. We use many sources of information from which to learn in my classes.	56/465 12.0%	200/465 43.0%	58/465 12.5%	136/465 29.2%	15/465 3.2%
18. The way we go about learning at Central will help me become a more self-sufficient person after I graduate.	57/465 12.3%	92/465 19.8%	168/465 36.1%	129/465 27.7%	19/465 4.1%
19. In my classes the students are encouraged to communicate with each other to share information and ideas about the lesson.	98/465 21.1%	134/465 28.9%	56/465 12.0%	152/465 32.7%	25/465 5.4%

PART II, GUIDANCE SERVICES

20. My counselor has helped me understand why we are going to a new kind of schedule at Central.	142/465 30.5%	180/465 38.7%	47/465 9.9%	77/465 16.6%	19/465 4.1%
21. I get plenty of help from my counselor in planning my selection of courses for my needs.	95/465 20.4%	103/465 22.2%	60/465 12.9%	139/465 29.9%	68/465 14.6%

	SD	D	U	A	SA
22. My counselor has helped me plan my course sequences under the new scheduling plan.	129/462 27.9%	196/462 42.4%	43/462 9.3%	71/462 15.4%	23/462 5.0%
23. I have received valuable assistance from my counselor on career or vocational problems.	122/462 26.4%	167/462 36.1%	71/462 15.4%	77/462 16.7%	25/462 5.4%
24. I know my counselor and he/she knows who I am.	89/462 19.3%	99/462 21.4%	64/462 13.9%	122/462 26.4%	88/462 19.0%
25. I can get in to see my counselor when I need to.	60/462 13.0%	82/462 17.7%	99/462 21.4%	161/462 34.8%	60/462 13.0%
26. My counselor gives me reliable information.	29/462 6.3%	33/462 7.1%	122/462 26.4%	204/462 44.2%	74/462 16.0%
27. Counselors at Central treat students as individuals with different personalities and problems.	31/462 6.7%	29/462 6.3%	110/462 23.8%	194/462 42.0%	98/462 21.2%
28. A counselor has helped me with a personal problem.	149/462 32.3%	186/462 40.3%	53/462 11.5%	50/462 10.8%	24/462 5.2%
29. I feel at ease when discussing a problem with my counselor.	62/462 13.4%	66/462 14.3%	146/462 31.6%	130/462 28.1%	58/462 12.6%
30. I feel my counselor can be trusted to keep confidential information he knows about me.	39/462 8.4%	36/462 7.8%	134/462 29.0%	171/462 37.0%	82/462 17.7%
31. My counselor has done a good job of interpreting my test scores to me so I know what they mean.	61/462 13.2%	116/462 25.1%	168/462 36.3%	95/462 20.6%	22/462 4.8%
32. Test results are used by CHS counselors to help students understand their strengths and weaknesses and to help them make decisions.	29/462 6.3%	57/462 12.3%	167/462 36.1%	182/462 39.4%	27/462 5.8%
33. I am satisfied with the guidance and counseling services at Central.	63/462 13.6%	55/462 11.9%	117/462 25.3%	155/462 33.5%	72/462 15.6%

PART III, STUDENTS' ATTITUDE TOWARD TEACHERS

34. My teachers are concerned about my learning progress.	51/462 11.0%	60/462 13.0%	161/462 34.8%	166/462 35.9%	24/462 5.2%

	SD	D	U	A	SA
35. My teachers make an effort to get to know me as an individual.	54/464 11.6%	161/464 34.7%	87/464 18.8%	136/464 29.3%	26/464 5.6%
36. My teachers like their students.	35/464 7.5%	56/464 12.1%	170/464 36.6%	182/464 39.2%	21/464 4.5%
37. Most students in my class respect the teacher.	39/464 8.4%	90/464 19.4%	108/464 23.3%	21[illegible]/464 [illegible].5%	16/464 3.4%
38. My teachers know their subject thoroughly.	15/464 3.2%	39/464 8.4%	66/464 14.2%	252/464 54.3%	92/464 19.8%
39. My teachers have the ability to communicate with students so we learn.	29/464 6.3%	75/464 16.2%	114/464 24.6%	221/464 47.6%	25/464 5.4%
PART IV, STUDENT, FACULTY, ADMINISTRATOR RELATIONSHIPS					
40. Teachers and administrators are consistent in their day-to-day expectations for student behavior and conduct.	77/464 16.6%	96/464 20.7%	88/464 19.0%	169/464 36.4%	34/464 7.3%
41. All students in this school are treated fairly and impartially.	186/464 40.1%	132/464 28.4%	85/464 18.3%	53/464 11.4%	8/464 1.7%
42. I feel I can voice my complaints about school in a reasonable way without fear of reprisal from teachers or administrators.	196/464 42.2%	117/464 25.2%	72/464 15.5%	72/464 15.5%	7/464 1.5%
43. Student opinion has an influence on school policy.	164/464 35.3%	109/464 23.5%	88/464 19.0%	87/464 18.8%	16/464 3.4%
44. Administrators in this school are approachable.	128/464 27.6%	103/464 22.2%	133/464 28.7%	94/464 20.3%	6/464 1.3%
45. Central's administrators show concern about the needs and problems of individual students.	123/464 26.5%	121/464 26.1%	145/464 31.3%	72/464 15.5%	3/464 .6%
46. High school students are treated like young adults in this school.	102/464 22.0%	102/464 22.0%	107/464 23.1%	141/464 30.4%	12/464 2.6%
47. Teachers and administrators seem to have an understanding of the changes in society which are affecting the attitudes of youth.	129/464 27.8%	139/464 30.0%	128/464 27.6%	64/464 13.8%	4/464 .9%

PART V, TEACHING PROCEDURES

	SD	D	U	A	SA
48. My teachers take into consideration individual differences between students when planning lessons.	63/461 13.6%	183/461 39.7%	144/461 31.2%	68/461 14.8%	3/461 .7%
49. My teachers prepare thoroughly.	14/461 3.0%	57/461 12.4%	128/461 27.8%	230/461 49.9%	32/461 6.9%
50. The classes I'm taking are taught in an interesting way.	58/461 12.6%	149/461 32.3%	85/461 18.4%	147/461 31.9%	22/461 4.8%
51. Time in class is scheduled so we have a chance to learn through several different kinds of class activities.	25/461 5.4%	155/461 33.6%	92/461 20.0%	177/461 38.4%	12/461 2.6%
52. In my classes we usually get results back quickly from the tests we take.	59/461 12.8%	138/461 29.9%	69/461 15.0%	169/461 36.7%	26/461 5.6%
53. In my classes tests are frequently used as learning experiences.	37/461 8.0%	111/461 24.1%	98/461 21.3%	189/461 40.8%	26/461 5.6%
54. In this school the purpose most teachers have for giving tests is to flunk out the poorer students.	131/461 28.4%	208/461 45.1%	84/461 18.2%	21/461 4.6%	17/461 3.7%
55. Assignments in my classes are thoroughly explained so I understand what is expected of me.	49/461 10.6%	148/461 32.1%	103/461 22.3%	148/461 32.1%	13/461 2.8%

PART VI, CURRICULUM CONTENT

56. The things we learn in our classes are important and worthwhile -- they are relevant to my present and future needs.	47/461 10.2%	132/461 28.6%	117/461 25.4%	139/461 30.2%	26/461 5.6%
57. My classes are too hard and my teachers are too demanding.	41/461 8.9%	224/461 48.6%	121/461 26.2%	51/461 11.1%	24/461 5.2%
58. Classes at Central are too easy -- teachers don't push us hard enough.	165/461 35.8%	219/461 47.5%	51/461 11.1%	17/461 3.7%	9/461 1.9%

	SD	D	U	A	SA
59. Central's class schedule has enough flexibility so I can usually get the courses I want to take.	42/461 9.1%	74/461 16.1%	60/461 13.0%	247/461 53.6%	38/461 8.2%
60. The curriculum offered here is broad enough to include the courses I want and/or need.	25/465 5.4%	74/465 15.9%	66/465 14.2%	257/465 55.3%	43/465 9.2%
61. I am satisfied with my learning program at Central High School.	38/465 8.2%	86/465 18.5%	99/465 21.3%	218/465 46.9%	24/465 5.2%
PART VII, EXTRACURRICULAR ACTIVITIES					
62. Student activities at Central are open to every student.	29/465 6.2%	93/465 20.0%	56/465 12.0%	230/465 49.4%	57/465 12.3%
63. I have plenty of opportunity to participate in school activities.	26/465 5.6%	57/465 12.3%	49/465 10.5%	268/465 57.6%	65/465 14.0%
64. The activity program at Central is varied enough to provide something interesting and worthwhile for every student.	24/465 5.2%	75/465 16.1%	81/465 17.4%	219/465 47.1%	66/465 14.2%
65. A few students dominate all of the clubs and other activities in this school.	21/465 4.5%	73/465 15.7%	87/465 18.7%	128/465 27.5%	156/465 33.5%
66. Central puts too much emphasis on social life and activities and not enough on learning and scholarship.	96/465 20.6%	197/465 42.4%	92/465 19.8%	53/465 11.4%	27/465 5.8%
PART VIII, IDENTIFICATION WITH SCHOOL					
67. I feel I "belong" -- have an identity and am somebody -- here at Central.	61/465 13.1%	70/465 15.1%	103/465 22.2%	185/465 39.8%	46/465 9.9%
68. Students here take pride in Central High School and are proud of the school's accomplishments.	41/465 8.8%	71/465 15.3%	108/465 23.2%	186/465 40.0%	59/465 12.7%
69. Students at Central are satisfied with their school.	86/465 18.5%	103/465 22.1%	147/465 31.6%	116/465 24.9%	13/465 2.8%

SUMMARY OF THE CAPE CENTRAL "FEELINGS ABOUT YOUR SCHOOL" STUDENT OPINIONNAIRE

Second Semester

PART I, INQUIRY AND DISCOVERY TECHNIQUES

	SD	D	U	A	SA
1. Teachers in my classes clearly define a learning problem then help us students work toward a solution.	31/427 7.3%	116/427 27.2%	87/427 20.4%	174/427 40.7%	19/427 4.4%
2. The goals of the course and of each assignment are explained by the teacher and are clearly understood by the students.	38/427 8.9%	145/427 34.0%	86/427 20.1%	143/427 33.5%	15/427 3.5%
3. In my classes the teachers do most of the talking.	13/427 3.0%	74/427 17.3%	45/427 10.5%	196/427 45.9%	99/427 23.2%
4. My teachers encourage self-expression by students.	28/427 6.6%	89/427 20.8%	83/427 19.4%	188/427 44.0%	39/427 9.1%
5. The most common source of information in my classes is the teacher.	30/427 7.0%	70/427 16.4%	53/427 12.4%	201/427 47.1%	73/427 17.1%
6. My teachers usually teach us by telling us the things we need to know.	31/427 7.3%	87/427 20.4%	78/427 18.3%	202/427 47.3%	29/427 6.8%
7. In my classes we get most of what we are to learn from the textbook.	41/427 9.6%	129/427 30.2%	57/427 13.3%	158/427 37.0%	42/427 9.9%
8. My teachers usually do not tell us the answers, but they help guide us in discovering the answers.	27/427 6.3%	79/427 18.5%	89/427 20.8%	199/427 46.6%	33/427 7.7%
9. Teachers ask more questions that make us reason out WHY than they do fact questions about WHAT or WHO or WHEN.	39/427 9.1%	101/427 23.7%	93/427 21.8%	162/427 37.9%	32/427 7.5%
10. I can get the answers to most of the questions we are asked in class by looking them up in the book.	34/427 8.0%	96/427 22.5%	59/427 13.8%	201/427 47.1%	37/427 8.7%

	SD	D	U	A	SA
11. My teachers make us think and draw conclusions about problems.	23/427 5.4%	50/427 11.7%	102/427 23.9%	233/427 54.6%	19/427 4.4%
12. In my classes we are given the opportunity to help plan our own courses of study.	150/427 35.1%	175/427 41.0%	54/427 12.6%	42/427 9.8%	6/427 1.4%
13. We usually learn broad, general ideas in our classes then have to use these to solve specific problems.	35/427 8.2%	93/427 21.8%	143/427 33.5%	146/427 34.2%	10/427 2.3%
14. We usually learn by starting with several small, specific facts, then we put these facts together to reach broad conclusions or generalizations.	35/427 8.2%	102/427 23.9%	122/427 28.6%	156/427 36.5%	12/427 2.8%
15. Students are given many opportunities to learn on their own.	49/427 11.5%	86/427 20.1%	83/427 19.4%	184/427 43.1%	25/427 5.9%
16. I have many assignments which require me to research problems in the library.	60/427 14.1%	163/427 38.2%	47/427 11.0%	113/427 26.5%	44/427 10.3%
17. We use many sources of information from which to learn in my classes.	55/427 12.9%	151/427 35.4%	65/427 15.5%	133/427 31.1%	22/427 5.2%
18. The way we go about learning at Central will help me become a more self-sufficient person after I graduate.	83/427 19.4%	82/427 19.2%	143/427 33.5%	101/427 23.7%	18/427 4.2%
19. In my classes the students are encouraged to communicate with each other to share information and ideas about the lesson.	97/427 22.7%	108/427 25.3%	59/427 13.8%	139/427 32.6%	24/427 5.6%

PART II, GUIDANCE SERVICES

20. My counselor has helped me understand why we are going to a new kind of schedule at Central	109/427 25.5%	100/427 23.4%	49/427 11.5%	122/427 28.6%	47/427 11.0%
21. I get plenty of help from my counselor in planning my selection of courses for my needs.	90/427 21.1%	85/427 19.9%	53/427 12.4%	144/427 33.7%	55/427 12.9%

	SD	D	U	A	SA
22. My counselor has helped me plan my course sequences under the new scheduling plan.	77/426 18.1%	107/426 25.1%	45/426 10.6%	152/426 35.7%	45/426 10.6%
23. I have received valuable assistance from my counselor on career or vocational problems.	104/426 24.4%	129/426 30.3%	77/426 18.1%	85/426 20.0%	31/426 7.3%
24. I know my counselor and he/she knows who I am.	48/426 11.3%	48/426 11.3%	62/426 14.6%	182/426 42.7%	86/426 20.2%
25. I can get in to see my counselor when I need to.	83/426 19.5%	74/426 17.4%	61/426 14.3%	154/426 36.2%	54/426 12.7%
26. My counselor gives me reliable information.	39/426 9.2%	33/426 7.7%	102/426 23.9%	188/426 44.1%	64/426 15.0%
27. Counselors at Central treat students as individuals with different personalities and problems.	44/426 10.3%	49/426 11.5%	96/426 22.5%	163/426 38.3%	74/426 17.4%
28. A counselor has helped me with a personal problem.	142/426 33.3%	161/426 37.8%	51/426 12.0%	50/426 11.7%	22/426 5.2%
29. I feel at ease when discussing a problem with my counselor.	78/426 18.3%	72/426 16.9%	103/426 24.2%	138/426 32.4%	35/426 8.2%
30. I feel my counselor can be trusted to keep confidential information he knows about me.	54/426 12.7%	47/426 11.0%	105/426 24.6%	154/426 36.2%	66/426 15.5%
31. My counselor has done a good job of interpreting my test scores to me so I know what they mean.	67/426 15.7%	109/426 25.6%	113/426 26.5%	110/426 25.8%	27/426 6.3%
32. Test results are used by CHS counselors to help students understand their strengths and weaknesses and to help them make decisions.	63/426 14.8%	75/426 17.6%	126/426 29.6%	139/426 32.6%	23/426 5.4%
33. I am satisfied with the guidance and counseling services at Central.	83/426 19.5%	66/426 15.5%	80/426 18.8%	145/426 34.0%	52/426 12.2%

PART III, STUDENTS' ATTITUDE TOWARD TEACHERS

	SD	D	U	A	SA
34. My teachers are concerned about my learning progress.	48/426 11.3%	89/426 20.9%	148/426 34.7%	127/426 29.8%	14/426 3.3%
35. My teachers make an effort to get to know me as an individual.	52/426 12.2%	110/426 25.8%	112/426 26.3%	141/426 33.1%	11/426 2.6%
36. My teachers like their students.	30/426 7.0%	57/426 13.4%	130/426 30.5%	193/426 45.3%	16/426 3.8%
37. Most students in my class respect the teacher.	46/426 10.8%	90/426 21.1%	96/426 22.5%	175/426 41.1%	19/426 4.5%
38. My teachers know their subject thoroughly.	20/426 4.7%	24/426 5.6%	80/426 18.8%	220/426 51.6%	82/426 19.2%
39. My teachers have the ability to communicate with students so we learn.	27/426 6.3%	69/426 16.2%	110/426 25.8%	195/426 45.8%	25/426 5.9%

PART IV, STUDENT, FACULTY, ADMINISTRATOR RELATIONSHIPS

40. Teachers and administrators are consistent in their day-to-day expectations for student behavior and conduct.	66/426 15.5%	105/426 24.6%	93/426 21.8%	146/426 34.3%	16/426 3.8%
41. All students in this school are treated fairly and impartially.	209/426 49.1%	111/426 26.1%	63/426 14.8%	37/426 8.7%	6/426 1.4%
42. I feel I can voice my complaints about school in a reasonable way without fear of reprisal from teachers or administrators.	157/426 36.9%	114/426 26.8%	76/426 17.8%	69/426 16.2%	10/426 2.3%
43. Student opinion has an influence on school policy.	148/426 34.7%	97/426 22.8%	95/426 22.3%	78/426 18.3%	8/426 1.9%
44. Administrators in this school are approachable.	89/426 20.9%	94/426 22.1%	120/426 28.2%	106/426 24.9%	17/426 4.0%
45. Central's administrators show concern about the needs and problems of individual students.	102/426 23.9%	125/426 29.3%	120/426 28.2%	70/426 16.4%	9/426 2.1%

	SD	D	U	A	SA
46. High school students are treated like young adults in this school.	99/426 23.2%	89/426 20.9%	96/426 22.5%	131/426 30.8%	11/426 2.6%
47. Teachers and administrators seem to have an understanding of the changes in society which are affecting the attitudes of youth.	115/426 27.0%	110/426 25.8%	124/426 29.1%	69/426 16.2%	8/426 1.9%

PART V, TEACHING PROCEDURES

48. My teachers take into consideration individual differences between students when planning lessons.	63/427 14.8%	159/427 37.2%	129/427 30.2%	67/427 15.7%	9/427 2.1%
49. My teachers prepare thoroughly.	17/427 4.0%	62/427 14.5%	102/427 23.9%	202/427 47.3%	44/427 10.3%
50. The classes I'm taking are taught in an interesting way.	74/427 17.3%	116/427 27.2%	95/427 22.2%	126/427 29.5%	16/427 3.7%
51. Time in class is scheduled so we have a chance to learn through several different kinds of class activities.	40/427 9.4%	129/427 30.2%	88/427 20.6%	149/427 34.9%	21/427 4.9%
52. In my classes we usually get results back quickly from the tests we take.	62/427 14.5%	89/427 20.8%	59/427 13.8%	184/427 43.1%	33/427 7.7%
53. In my classes tests are frequently used as learning experiences.	45/427 10.5%	115/427 26.9%	91/427 21.3%	154/427 36.1%	22/427 5.2%
54. In this school the purpose most teachers have for giving tests is to flunk out the poorer students.	121/427 28.3%	188/427 44.0%	66/427 15.5%	35/427 8.2%	17/427 4.0%
55. Assignments in my classes are thoroughly explained so I understand what is expected of me.	40/427 9.4%	103/427 24.1%	82/427 19.2%	184/427 43.1%	18/427 4.2%

PART VI, CURRICULUM CONTENT

	SD	D	U	A	SA
56. The things we learn in our classes are important and worthwhile--they are relevant to my present and future needs.	67/427 15.7%	92/427 21.5%	106/427 24.8%	142/427 33.3%	20/427 4.7%
57. My classes are too hard and my teachers are too demanding.	53/427 12.4%	219/427 51.3%	95/427 22.2%	41/427 9.6%	19/427 4.4%
58. Classes at Central are too easy--teachers don't push us hard enough.	112/427 26.2%	211/427 49.4%	69/427 16.2%	26/427 6.1%	9/427 2.1%
59. Central's class schedule has enough flexibility so I can usually get the courses I want to take.	49/427 11.5%	54/427 12.6%	54/427 12.6%	236/427 55.3%	34/427 8.0%
60. The curriculum offered here is broad enough to include the courses I want and/or need.	46/427 10.8%	77/427 18.0%	60/427 14.1%	221/427 51.8%	23/427 5.4%
61. I am satisfied with my learning program at Central High School.	45/427 10.5%	82/427 19.2%	101/427 23.7%	184/427 43.1%	15/427 3.5%

PART VII, EXTRACURRICULAR ACTIVITIES

62. Student activities at Central are open to every student.	85/427 19.9%	89/427 20.8%	59/427 13.8%	158/427 37.0%	36/427 8.4%
63. I have plenty of opportunity to participate in school activities.	45/427 10.5%	77/427 18.0%	59/427 13.8%	205/427 48.0%	41/427 9.6%
64. The activity program at Central is varied enough to provide something interesting and worthwhile for every student.	44/427 10.3%	83/427 19.4%	100/427 23.4%	159/427 37.2%	41/427 9.6%
65. A few students dominate all of the clubs and other activities in this school.	27/427 6.3%	56/427 13.1%	63/427 14.8%	131/427 30.7%	150/427 35.1%
66. Central puts too much emphasis on social life and activities and not enough on learning and scholarship.	76/427 17.8%	157/427 36.8%	102/427 23.9%	55/427 12.9%	37/427 8.7%

PART VIII, IDENTIFICATION WITH SCHOOL

	SD	D	U	A	SA
67. I feel I "belong"--have an identity and am somebody--here at Central.	70/427 16.4%	58/427 13.6%	97/427 22.7%	173/427 40.5%	29/427 6.8%
68. Students here take pride in Central High School and are proud of the school's accomplishments.	68/427 16.0%	70/427 16.4%	106/427 24.8%	150/427 35.1%	33/427 7.7%
69. Students at Central are satisfied with their school.	85/427 19.9%	96/427 22.5%	137/427 32.1%	96/427 22.5%	13/427 3.0%

Appendix G

SUMMARY DESCRIPTION OF TEAM PLANNING SESSIONS

June 12-16

Monday:
1. Listed eight units to be covered in each semester.
2. Began short story unit and made selections for required and supplementary reading.
3. Discussed techniques for two hours classtime.

Tuesday:
1. Typed short stories on stencils.
2. Completed Independent Study Plan for all tracks and typed outline for short story evaluation.
3. Compiled short story supplementary reading list.
4. Conference with Dr. Albers on schedule and teaching techniques.

Wednesday:
1. Typed short stories on stencils.
2. Began short story day-by-day lesson plan; decided on use of modules for first week; outlined home assignments in reading.
3. Continued outside reading for supplementary stories for unit.

Thursday:
1. Completed day-by-day plan for short story unit for student handout.
2. Typed stencils for inclass handout.
3. Discussed books to be ordered for classes, and worked on requisition forms with Mr. Sifford.

Friday:
1. Ran mimeograph machine and assembled three stories.
2. Xeroxed two stories.
3. Checked material for student folders.

June 19-23

Monday:
1. Made vocabulary list for short story unit.
2. Typed short story and vocabulary list.
3. Assembled stories for inclass reading.

Tuesday:
1. Drew up Independent Study Student Contract.
2. Typed and mimeographed study guides and stories.
3. Selected composition topics and typed on spirit masters.
4. Arranged for video tape by student (student reading of short stories).

Wednesday:
1. Completed student folders on short story unit.
2. Discussed grammar, poetry, and novel units and worked out a time schedule for each. Also decided on units to be taught together, and units to be taught in smaller groups.

Thursday:
1. Discussed methods of grammar instruction with Dr. Albers.
2. Went to Junior High and Media Center to find films for novel, poetry, and grammar units.

Friday:
1. Blocked out day-by-day plan for poetry unit.
2. Typed exercise sheets, supplementary poems for students.
3. Assembled material for introductory lectures, transparencies, handouts.

June 26-30

Monday:
1. Continued work on poetry unit (typing and planning).
2. Prepared handouts for student reading and writing of poetry.
3. Planned for audio-visual materials; mainly, transparencies and films.

Tuesday:
1. Typed supplementary reading sheets of poems relevant to young people.
2. Checked library for recordings, books, and other materials for poetry unit.

Wednesday:
1. Completed poetry unit (lecture notes).
2. Ran off various materials on Xerox.
3. Made up supplementary reading list for non-fiction unit (to be expanded on).

Thursday:
1. Mimeographed study guides and extra reading for students.
2. Planned day-by-day schedule for drama and novel units.
3. Made out film list for various units.

Friday:
1. Completed running off stencils for poetry unit and assembled materials at Junior High.
2. Previewed films for poetry and novel units.
3. Finished running off stencils for poetry unit.

APPENDIX H

ANECDOTAL REPORTS OF CLASSROOM OBSERVATIONS

CENTRAL HIGH SCHOOL - PROJECT OBJECTIVE #4

Report of Classroom Visit - First Quarter

The writer visited Mrs. Karen Profilet's advanced biology class on Monday morning, November 1, 1971. This class is scheduled for 115 minutes or two of the traditional class periods, including five minutes passing time. The nineteen students in the class were working in small groups of two and three students. They were using microscopes to examine material on slides. There was a high level of activity, the students were communicating, but the noise level was not excessive. The teacher was making contacts with different groups by moving quietly around the room.

Members of the class frequently raised their hand to ask a question. These student initiated questions indicated interest in the learning task. Instead of giving direct answers, the teacher's responses gave guidance and direction to the activities and encouraged the students to draw their own conclusions. The teacher, in the opinion of the observer, was successful in applying inquiry and discovery techniques during this class.

Wade Callicutt
Director of Secondary Education

Second Quarter

CENTRAL HIGH SCHOOL - TITLE III PROJECT

REPORT ON CLASSROOM VISITATION

A visit was made to Mr. Robert Knight's third hour trimester Government class on January 10, 1972. Legislative processes at the state level were being discussed. The teacher exhibited skill in asking questions which elicited provocative responses from the students. Student-teacher dialogue reflected critical thinking and an inductive approach to learning. During this visit a high degree of verbal interaction without excessive teacher dominance was observed.

Wade Callicutt

Wade Callicutt

CENTRAL HIGH SCHOOL - TITLE III PROJECT

REPORT ON CLASSROOM VISITATION
(Third Quarter)

Observations of Miss Alene Sadler's senior English class were made on March 6, 1972. This was a double hour or block class. Miss Sadler reviewed with the class a theme writing assignment that had been made earlier. She restated the objectives of the project which were designed to be accomplished on an individual basis. After this was done and a number of student questions were answered, the students proceeded on their own initiative. They were free to use reference materials in the room and to discuss their activities with other students and the teacher. This was a structured independent study activity which apparently was well planned and successful.

Wade Callicutt

CENTRAL HIGH SCHOOL - TITLE III PROJECT

REPORT ON CLASSROOM VISITATION
(Fourth Quarter)

A visit was made to Mr. Jay Thomas' Mathematics II (geometry) class on Wednesday, May 3, 1972. The students were engaged in extending their knowledge of geometry by discovering and proving the properties of quadrilaterals, of other polygons, and of polyhedrons. After a review of basic concepts and formulas, the students were encouraged to attempt certain measurements and analytic proofs on their own. They were free to exchange ideas and seek help from each other. The teacher provided reinforcement and was available for assistance. The students appeared to be interested in the learning activity and did not become upset or frustrated when they could not correctly perform the operation required. The level of motivation was high as the teacher provided the organization for inquiry and discovery.

Wade Callicutt

Wade Callicutt

REPORT OF CLASSROOM OBSERVATION
October 21, 1971

At the request of the instructor, Mr. Robert Knight, the ESEA Title III Project Director visited and observed his senior "Trimester" Government class. The class was involved in a unique project in which they were attempting to "rewrite" the Constitution of the United States as an approach to learning the Constitution. The uniqueness of the instructional approach being used had, no doubt, prompted the instructor's invitation to the project director.

The pupils were involved in a great deal of participation. Student initiation was very high. In fact, the instructor was only an occasional participant, usually to ask a "leading" question or to intercede to settle a disagreement or redirect the discussion.

The entire approach in the particular class session observed was built around inquiry and guided discovery methodology.

Dallas Albers, Project Director

REPORT OF CLASSROOM OBSERVATION
December 6, 1971

The Project Director visited and observed an American History class at the invitation of the instructor, Mrs. Alta Muegge. Mrs. Muegge has been attempting to increase student participation in the verbal interactive climate of the classroom, and has been trying to increase the amount of inquiry being used in instruction. She has been experiencing difficulty evoking responses from her students.

It is this observer's opinion that Mrs. Muegge is trying to increase the involvement of her students. Her approach to instruction involved many teacher questions, most of which were knowledge level questions, but some of which were at a higher level of cognition. The problem appears to be that in this particular class she has an unusual number of retiring, unresponsive pupils. Only three pupils were observed to respond to her questions with any degree of frequency, and their responses to questions of a higher cognitive level indicated a lack of indepth thought before responding.

The teacher's attempts to introduce more inquiry methodology cannot be faulted. It may be that the unique blend of personalities among the membership of the class is such that they can never be led to respond to any approach other than didactic teaching. In any event, increasing the responsiveness of these particular pupils to a new process will be a challenge.

Dallas Albers, Project Director

REPORT OF CLASSROOM OBSERVATION
March 15, 1972

Today this observer visited in the second period American History block class taught by Mr. Frank Nickell. The visit was not on invitation of the instructor and was unannounced, so the instructor did not have a "demonstration lesson" prepared. The observation should have been an unbiased presentation of the normal day-to-day instruction taking place in that classroom.

Mr. Nickell's class was well organized and there was much evidence that he had planned his lesson thoughtfully and thoroughly. Mr. Nickell's mode of presentation was predominantly lecture, supplemented by occasional "thought" questions directed to the pupils. Mr. Nickell's lecture was well organized, presented in a logical sequence, and was easy for the students to follow. His questions were usually "why" questions designed to get the students to think about the reasons underlying a historical fact or occurrence related in the lecture.

Student responses to the teacher's questions were good. Several different students did respond during the class session. Most of the responses were voluntary on the part of the students. They were usually sensible and showed evidence of having been reasoned out from a foundation of prior factual knowledge.

Inquiry and guided discovery methodology was used sparingly in Mr. Nickell's class, but the quality of questioning and responding did appear to be high.

Dallas Albers, Project Director

REPORT OF OBSERVATIONS OF DEMONSTRATION TEACHING
April 20, 1972

In lieu of a fourth quarter classroom observation, the Project Director observed and evaluated micro-teaching demonstrations presented by several inservice teachers on April 12 and 19. This provided an opportunity to observe several teachers, rather than one, presenting the best lesson they were able to prepare under demonstration conditions.

Each teacher had been assigned to prepare a ten- to twelve-minute demonstration lesson on a topic of their choosing. These lessons were to use inquiry or discovery techniques as much as was possible under the circumstances. They were to be taught in a demonstration setting with other inservice education teachers serving as "pupils" in a simulated high school classroom. These micro-teaching episodes were video-taped, coded for verbal interactive behavior, and criticized by other teachers, administrators, and instructors from the Center for Educational Improvement.

This observer recorded observations of these micro-teaching episodes noting the extent to which inquiry or guided discovery methods were used. These recorded observations are summarized on the following page.

TEACHER OBSERVED	EVALUATION OF INQUIRY METHODOLOGY				COMMENTS
	Excellent	Superior	Average	Improvement Needed	
Aeschlimann			X		Lesson well prepared and presented, but mostly didactic in approach.
Austin	X				Good inquiry. Level of questioning was high.
Johnson	X				Excellent lesson. High level of questioning.
Knight				X	Inquiry approach attempted. Teacher can't resist "telling." Missed numerous opportunities to lead student thinking with another "why" question.
Lynch			X		Some inquiry. Level of inquiry still low. Needed more imagination on the part of the teacher.
Muegge	X				A unique lesson developed on the affective level. Well planned and well taught.
Profilet		X			Well planned lesson. Not handled as expertly as was possible, mostly because the first-year teacher was self conscious teaching before experienced teachers.
Schrader		X			Well planned along the inquiry approach.
Williams	X				Excellent use of visual aid to promote an inquiry lesson.
Witvoet				X	Experienced much difficulty in developing a logical sequence of questions and answers. Had difficulty resisting urge to "tell."